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MATERIALS FOR THE STUDY OF ECONOMICS

READINGS IN THE ECONOMICS OF WAR

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READINGS
IN
THE ECONOMICS OF WAR

EDITED BY

J. MAURICE CLARK
WALTON H. HAMILTON
HAROLD G. MOULTON

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FOREWORD

When this war comes to be reviewed in proper perspective its social and economic aspects will be found at least as remarkable as the military events, and perhaps more instructive. And among them the influence of war on industry and the converse influence of industry on war will take a prominent place. We are indeed witnessing a phenomenon so extraordinary and unexpected that we can see only its surface as we pass, and are hardly able to comprehend even that. There has not been time to look beneath and try to read the deeper meaning of it all. But some lessons present themselves which he who runs may read. Never before has the supreme concerted effort demanded by war been so fully brought out and the inscrutable mystery of human conduct been so clearly posed as in this prodigious conflict of industrial nations.

SHADWELL

PREFACE

This volume aims to throw light upon the various economic questions which arise in connection with the war. It falls roughly into three divisions, which are concerned with the economic background of war in general, the economic reorganization required in view of the necessities of a world-war, and the economic questions involved in the reorganization of the industrial system at the end of the present conflict.

The first of these three divisions grows out of the necessity for a proper understanding of what is involved in the struggle. The theory of "the economic interpretation of history" has lost vogue and no longer suffices to give a full explanation. Yet however numerous and complicated are the factors that merge themselves into the psychological matrix out of which war springs, few indeed would deny that commercial rivalry, concessions, imperial exploitation, and a conviction on the part of certain political groups that war is a sound business venture, are factors of the first magnitude in explaining the present struggle. A consideration of questions such as these is of use, not only in answering the question of what the struggle is about, but also in pointing to the economic factors which deserve special consideration in the peace which is some time to come.

The second of these divisions—that concerned with the proper organization of the industrial system for war—is of primary importance. While military efficiency depends upon generalship, upon the numbers and quality of our troops and other factors, primarily military, these are inefficient unless the industrial system is made subservient to the military purpose. The importance of this cannot be overstated. Here it deserves even more than a word of explanation.

In their readiness to meet an armed enemy nations may be divided into two groups—those whose governments, industrial systems, and habits and customs have been arranged into a unified and coherent whole directed largely to military ends, and those which without thought for military strength have allowed these things to develop to

meet the needs of a people at peace. Germany belongs to the first group, the United States to the second.

In Germany the whole industrial system—farms, mines, factories, banks, railroads, commercial agencies, what not—had been arranged so that the whole could very quickly be converted into a gigantic engine of war. Railroads, for instance, were placed with a view to their strategic importance, phonograph factories were built with an eye to their conversion into munition plants, and science was whipped into subservience to the requirements of war. Care was had that the country should be able to produce as nearly as possible everything necessary to the successful prosecution of war and that the volume of national production should be large enough for war-time needs. The concentration of all wealth upon a single objective—the avoidance of great loss through duplication of effort and the waste which attaches to individuals or governmental departments working at cross-purposes —was achieved only by the elaboration in time of peace of a unified and far-reaching scheme of control. The latter not only attempted to regulate industry, government, and individual conduct by actual interference, but also, through a careful direction of the educational system, the church, and the press it attempted to create a single public opinion bent upon the accomplishment of military purposes.

The United States, on the contrary, had attempted to read no such end into its political system, its industrial organization, or its social life. The yield of farm, factory, and mine was devoted either to securing a larger productive equipment or to raising standards of living. The surplus produced over and above the demand of the population for necessities was allowed to find its way into individual incomes, where it appeared as comforts or vanities. Plants were not established with a view to a quick conversion to military uses, nor were they grouped with a view to their complementary character. The sprawling conglomerate net of the railroads of the country had no military design woven into its pattern. There was nowhere, either in the design of the industrial system or in national thought, the idea of a surplus of wealth as large as possible to be devoted to military ends. The system as a whole was little controlled by the government and responded to the many and varied desires of many men. The agencies through which opinion is organized—school, church, press, etc.—were left uncontrolled, and there was at the beginning of the war little appreciation of its nature and cost and less of the sweeping

transformations in industry, its control, and its organization necessary to make national wealth effective in war. A nation without preparation was required to get its house in readiness for war.

The problem with which the nation was confronted at the beginning of the war was an economic one. It can be very simply stated. It was to use our limited resources in national wealth, industrial equipment, and man power in the creation and equipment of an army as large as possible; to organize the whole into its component and complementary parts; and to hurl the mass most effectively upon the enemy. But this simplicity is in striking contrast with the changes in the economic organization necessary to secure its solution. The organization of establishments into trades and these into an industrial system had to be changed. The production of many goods had to cease and the production of many others to be greatly diminished. A scheme of control had to be set up which made radical departures from the business principles upon which we formerly relied. This has been responsible for such novel devices as the fixing of competitive prices, priority in the distribution of supplies, authority in regulation of food distribution, and even a compulsory recognition of unionism. And not only has the whole scheme of control been changed, but even the lives and habits and the thought of the people have had to be remade to fit these circumstances. To find the many ramifications of the change one has but to touch any single aspect of industrial life. A study of this reorganization involves a study of all economic motives, activities, and organization.

The third division of the volume is concerned with the changes which have come in the wake of the war and with the problems of reorganization and group welfare which will have to be met when it is over. Were the question only one of a return to the economic order existing before the war, the mechanical readjustments necessary thereto would make it extremely difficult. But it is no mere question of a return. The number of laborers, the amount of capital, and the state of natural resources have been too much affected; the scheme of industrial relations, the control of the government over industry, and the domain of direction and guidance have been too greatly changed; and the habits, thoughts, and ideals of the people have been too much modified for that. There is no definite program for reconstruction, as there is a program for war; but the complexity and variety of the problems and their intimate connection with welfare demand that they be given careful consideration.

One thing alone is enough to make the reorganization after the war more difficult than organization for war. Reorganization calls for a permanent structure where war called, so to speak, only for a temporary scaffolding. In place of an organization which men fired with patriotism will find it possible to use, we must have one which men under an ordinary mixture of motives and incentives will not find it too easy to abuse. It is nothing less than a permanent overhauling of our economic institutions which war has thrust upon us.

Hence this book is the expression, not merely of the economic side of the war, taken as a detached event, but rather of the part the war plays in the evolution of our economic institutions. It is the outgrowth, not merely of interest in the war, but of an enterprise of longer standing—namely, the attempt to vitalize economics for college students (and others as well) by making it relevant to the absorbing tasks of the present generation. In these tasks the war has come to take a central place.

Some critics may feel that the tone of the book is unduly favorable to the scheme of control which the war has brought into being. It is far too soon, in fact, to attempt a final estimate of success or failure in our actual performance, and hence the effort here has been rather to show the principles that must underlie such control. Emphasis is laid on the need for change in our system, the opportunities for improvement, and the dangers attending such experiments, but no attempt is made to pass judgment on the inevitable mistakes or to weigh the effectiveness or ineffectiveness with which the needs have been met and the opportunities utilized. Many economists will feel that certain topics that have been omitted from the volume should have found a place, and others will wish that more detailed analysis and criticism had been given in numerous connections. With reference to the former the editors must plead limitations of space. The latter is to be explained only in terms of the point of view. The book is not primarily designed for the specialist in isolated fields of inquiry; its main purpose is to reveal to undergraduate students and to the general reader the larger aspects of the problem of economic organization as it is conditioned by war.

It is hoped that this study of war conditions and problems may be of some service, however small, in connection with the waging of the war itself. Its primary function is a clear presentation of the relationship of economic organization to efficiency in war. If the

volume makes clearer this relationship and reveals the many elements of an economic program necessary to military success, and thereby develops a more enlightened public and governmental attitude, the work involved in its preparation will not have been in vain. It is hoped that the book will meet three uses: First, it should be of value in connection with courses in the economics of war, whether such courses be designed as a part of the training of the Student Army Training Corps or to give an appreciation to other students of the larger economic issues related to the war; second, it should do much to make the introductory course in economics of real significance in understanding the changing world in which we live; third, it should prove of interest to the general reader who is interested in the economic background of war, the economic basis of military efficiency, and the economic problems that will follow in the wake of the war.

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W. H. H.
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SEPTEMBER 2, 1918

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ECONOMIC BACKGROUND OF WAR

Introduction

From earliest ages animals have fought for food, savages have killed rival claimants to their hunting-grounds, and barbarians have waged war for plunder, making slaves of the conquered and taking their lands and other possessions. Rome supported her magnificence by the tribute of a subjugated world and perished largely from economic sterility and demoralization.

Modern wars are still matters of economic rivalry, though in more and more refined forms. Indeed, some think that these dilute economic antagonisms of today are not in themselves adequate to motive nations to fight (selection IV, 1), but rather pretexts for unleashing the tribal fighting impulses left over from earlier ages when tribal wars for the very means of life were a grim biological necessity. Be that as it may, war is not merely a product of economic rivalry but of that part of economic rivalry which is felt, rightly or wrongly, to be rivalry between sovereign social groups rather than between individuals. It must also be felt, rightly or wrongly, by the whole people to be worth fighting over—or at least by the influential or ruling classes.

War rests then, in the first place, on the idea of the nation as an economic unit, with economic rivalries involving the common national interest. Whether this idea be true, as List and Schmoller (selections I, 1 and 2) maintain, or false, as Norman Angell (selection V, 3) argues (cf. also Alvin Johnson on class interests), a belief in it makes for militarism, and disbelief for pacifism. The nation does undoubtedly perform some very important functions of an economic sort which make it better to belong to a large than to a small nation. It assists in production, and it restricts foreign competition and favors its own citizens above foreigners in the matter of access to productive opportunities. In both these kinds of assistance, which may be broadly classed as productive and discriminatory, much of the benefit comes without definite state action, as a natural by-product of a community of language and laws, and of the sense of solidarity felt

by private individuals that leads them to look first to their compatriots in buying and selling, or in organizing to buy or sell. Perhaps the chief productive services of nations from our present point of view can be grouped under the head of furthering, conserving, disseminating, and unifying the knowledge which is at the basis of economic efficiency, a fact which List and Schmoller both emphasize. A common system of laws and trade customs is extremely important from this point of view, and a foreign system is a genuine obstacle. The consular service is the branch of this system which (selection IV, 1) has most to do with the causes of war, and it is, curiously enough, just because this particular service is on a competitive, not on a purely co-operative, basis that it is inimical to peace.

But the national solidarity that breeds war springs chiefly, not from these productive services, but from the discriminatory policies of protectionism, concession-granting, etc. (See readings on "Commercial Rivalry.") These solidarities are real, as the German writers contend, though they need not be always so arrayed as to provoke wars. A universal state could render all the productive services better than the present nations, and its existence would render the discriminatory services superfluous. The reader will note, in the two selections from German writers which open this chapter, the prophecy of larger and larger economic units, growing by free union as well as by conquest. Norman Angell may be regarded as going one step farther in that he finds the present national-economic units already obsolete and reaches out to grasp what the earlier German writers merely dreamed of.

Pressure of population has apparently not caused an actual decrease in national well-being, but it has caused a cramped feeling. For the world as a whole, the ultimate answer must be the limitation of increase, but as long as a strong race can increase at the expense of other races, it will not submit to this unwelcome alternative, which carries with it things that seem to many to bear the stigma of degeneracy (selection II, 2).

The entire subject of "Economic Imperialism" is one that is humanly impossible to treat without bias, and this bias is in itself one of the data in the problem. The readings do not prove that trade in peaceful times does or does not depend on a navy, riches on colonies, world-progress on British development of Mesopotamia or on German development of Mesopotamia, but they do prove that people believe these things, and will go to war over these beliefs. Each side believes

the good of humanity demands the triumph of that side. The British writers on Mesopotamia and India believe this because the British are a more humane and liberal people than others, their empire having been almost forced on them as a by-product of trade. General von Bernhardi (selection III, 1) believes it because the Germans are the strongest race by the test of war, and hence should people the world of the future, under the national organization which is the secret of their strength. Accordingly it would seem that weaker races must give ground, and comfort themselves with ultimate benefits derived from an existence in the same world with a higher civilization than any they could attain by themselves. Canon Parfit (selection III, 4) tells us how Germany's control of the Turkish government looks to an Englishmen. But how did Great Britain's attempts to "introduce reforms" into Turkey look to Germany? Simply a rival attempt to gain control, under color of self-righteous claims to superior virtue which the German did not for a moment believe and which could only serve to convince him that the British are a nation of hypocrites. Talk about the "white man's burden" has the same effect.

The relation between war and economic imperialism is one of the most sinister of the many vicious circles within which humanity is bound. Protective tariffs lead to war, and the prospect of future wars is the principal reason, other than selfish class interests, for continuing a protective tariff. A nation must be self-sufficient and hence must expand till it commands a well-rounded complement of economic resources. But the principal reason why this seems necessary is to insure the economic life of the nation when trade is cut off by wars, blockades, or protective tariffs. And the process of expanding so as to achieve self-sufficiency is precisely what makes war inevitable. The German feels that it is intolerable for his trade to pass under British guns, though the trade is not damaged as long as the guns do not shoot. Is it worth while, then, to bring on a war, and give the guns their chance to shoot, chiefly in order to gain a position such that in some future war his trade may not suffer as much from the shooting of the guns as it has suffered in this one?

It is significant that the immediate cause of the present war, namely the Balkan crisis, is hardly touched upon in this chapter. It is an incident in a far larger game. The present trouble was precipitated, however, by the Balkan wars, which made the Balkan states strong and put a check on Austrian ambitions to dominate this region—a check which appeared final to the English diplomatist

(selection III, 5) but which only served to rouse the Central Powers to a determination to make good their position at any cost.

I. The Nation as an Economic Unit

1. THE NATION STANDS FIRST[1]

Between each individual and entire humanity, now stands the nation, with its special language and literature, with its peculiar origin and history, with its special manners and customs, laws and institutions, with the claims of all these for existence, independence, perfection, and continuance for the future, and with its separate territory; a society which, united by a thousand ties of mind and of interests, combines itself into one independent whole which recognizes the law of right for and within itself, and in its united character is still opposed to other societies of a similar kind in their national liberty, and consequently, under the existing conditions of the world, can maintain self-existence and independence only by its own power and resources. As the individual chiefly obtains by means of the nation mental culture, power of production, security, and prosperity, so is the civilization of the human race conceivable and possible only by means of the civilization and development of the individual nations.

Meanwhile, however, an infinite difference exists in the condition and circumstances of the various nations; we observe among them giants and dwarfs, well-formed bodies and cripples, civilized, half-civilized, and barbarous nations; but in all of them, as in the individual human being, exists the impulse of self-preservation, the striving for improvement which is implanted by nature. It is the task of politics to civilize the barbarous nationalities, to make the small and weak ones great and strong, but, above all, to secure to them existence and continuance. It is the task of national economy to accomplish the *economical development of the nation*, and to prepare it for admission into the universal society of the future.

[1] By Friedrich List. Adapted from *The National System of Political Economy*, pp. 141–43. Lloyd's Translation. Copyright by Longmans, Green & Co., 1904.

Ed. Note.—Friedrich List (1789–1846) was perhaps the most vigorous German economic thinker of his day, a forerunner of the later German historical school, and actively concerned with the customs union which paved the way for the creation of the present German Empire by welding the German states into an economic unit. His *National System* was first published in 1841.

A nation in its normal state possesses one common language and literature, a territory endowed with manifold natural resources, extensive, and with convenient frontiers and a numerous population. Agriculture, manufactures, commerce, and navigation must all be developed in it proportionately; arts and sciences, educational establishments, and universal cultivation must stand in it on an equal footing with material production. Its constitution, laws, and institutions must afford to those who belong to it a high degree of security and liberty, and must promote religion, morality, and prosperity; in a word, must have the well-being of its citizens as its object. It must possess sufficient power on land and at sea to defend its independence and to protect its foreign commerce. It will possess the power of beneficially affecting the civilization of less advanced nations, and by means of its own surplus population and of their mental and material capital to found colonies and beget new nations.

A large population and an extensive territory endowed with manifold national resources are essential requirements of the normal nationality; they are the fundamental conditions of mental cultivation as well as of material development and political power. A nation restricted in the number of its population and in territory, especially if it has a separate language, can possess only a crippled literature, crippled institutions for promoting art and science. A small state can never bring to complete perfection within its territory the various branches of production. In it all protection becomes mere private monopoly. Only through alliances with more powerful nations, by partly sacrificing the advantages of nationality, and by excessive energy, can it maintain with difficulty its independence.

A nation which possesses no coasts, mercantile marine, or naval power, or has not under its dominion and control the mouths of its rivers, is in its foreign commerce dependent on other countries; it can neither establish colonies of its own nor form new nations; all surplus population, mental and material means, which flows from such a nation to uncultivated countries is lost to its own literature, civilization, and industry, and goes to the benefit of other nationalities.

Territorial deficiencies of the nation can be remedied either by means of hereditary succession, as in the case of England and Scotland; or by purchase, as in the case of Florida and Louisiana; or by conquests, as in the case of Great Britain and Ireland.

In modern times a fourth means has been adopted, which leads to this object in a manner much more in accordance with justice and

with the prosperity of nations than conquest, and which is not so dependent on accidents as hereditary succession, namely, the union of the interests of various states by means of free conventions. By its tariff union, the German nation first obtained one of the most important attributes of its nationality.

2. NATIONAL ECONOMIC UNITY[1]

What, to each in its time, gave riches and superiority first to Milan, Venice, Florence, and Genoa; then later to Spain and Portugal; and now to Holland, France, and England, and to some extent to Denmark and Sweden, was a *state* policy in economic matters as superior to the territorial as that had been to the municipal. Those states began to weave the great economic improvement of the time into their political institutions and policy, and to bring about an intimate relation between the one and the other. States arose, forming united and therefore strong and wealthy economic bodies, quite different from earlier conditions. It was not only a question of state armies, fleets, and civil services; it was a question rather of unifying systems of finance and economy which should encompass the forces of millions and whole countries and give unity to their social life. There had always been great states; but they had been bound together neither by traffic nor by the organization of labour nor by any other like forces. The whole internal history of the seventeenth and eighteenth centuries, not only in Germany but everywhere else, is summed up in the opposition of the economic policy of the state to that of the town, the district, and the several estates; the whole foreign history is summed up in the opposition to one another of the separate interests of the newly rising states, each of which sought to obtain and retain its place in the circle of European nations and in that foreign trade which now included America and India. Questions of political power were at issue, which were, at the same time, questions of economic organization. What was at stake was the creation of *real* political organizations, the centre of which should be, not merely a state policy reaching out in all directions, but rather the living heartbeat of a united sentiment.

[1] By Gustav Schmoller. Adapted from *The Mercantile System*, pp. 48–70. Copyright by Macmillan & Co., 1895. The original was published in 1884.

Ed. Note.—Gustav Schmoller (1838—) is a professor at the University of Berlin, member of the Prussian Herrenhaus, and one of the foremost German economists.

Only he who thus conceives of mercantilism will understand it; in its innermost kernel it is nothing but state making—not state making in a narrow sense, but state making and national-economy making at the same time; state making in the modern sense, which creates out of the political community an economic community, and so gives it a heightened meaning. The essence of the system lies, not in some doctrine of money or of the balance of trade; not in tariff barriers, protective duties, or navigation laws; but in something far greater—namely, in the total transformation of society and its organization, as well as of the state and its institutions—in the replacing of a local and territorial economic policy by that of the national state.

In proportion as the economic interests of whole states, after much agitation of public opinion, found a rallying point in certain generally accepted postulates, there could not fail to arise the thought of a national policy, of protection by the state against the outside world, and of the support by the state of great national interests in their struggle with foreign countries. The conception of a national agriculture, of a national industry, of national shipping and fisheries, of national currency and banking systems, of a national division of labour, and of a national trade must have arisen before the need was felt of transforming old municipal and territorial institutions into national and state ones. But as soon as that had taken place it must have seemed a matter of course that the whole power of the state, in relation to other countries as well as at home, should be placed at the service of these collective interests, just as the political power of the towns and territories had served their municipal and district interests. The struggle for existence, in economic life in particular as in social life in general, is necessarily carried on at all times by smaller or larger groups and communities. That will also be the case in all time to come. And the practice and theory of those times, answering, as they did, to this universal tendency, were nearer reality than the theory of Adam Smith; and so also were the main ideas of Friedrich List.

All economic and political life rests upon physical mass-movements, mass-sentiments, and mass-conceptions gravitating around certain centres. That age could begin to think and act in the spirit of free trade, which had left so far behind it the toilsome work of national development that it regarded its best results as matters of course and forgot the struggle they had cost; an age which, with cosmopolitan sentiments, with great institutions and interests of international traffic, with a humanised international law, and an

individualist literature everywhere diffused was already beginning to live in the ideas and tendencies of a world-economy.

The long wars, each lasting several years or even decades, which fill the whole period from 1600 to 1800 and have economic objects as their main aim; the open declaration by the Grand Alliance of 1689 that their object was the destruction of French commerce; the prohibition by the Allies of all trade, even by neutrals, with France, without the slightest regard to international law; all this shows the spirit of the time in its true light. The national passion of economic rivalry had been raised to such a height that it was only in wars like these that it could find its full expression and satisfaction. To be content, in the intermediate years of peace, to carry on the conflict with prohibition, tariffs, and navigation laws instead of with sea fights; to give, as they did in these years of peace, somewhat more attention to the infant voice of international law than in time of war—this was in itself a moderating of international passion.

In spite of the fact that it is the individual and the family that labour, produce, trade, and consume, it is the larger social bodies which, by their common attitude and action, intellectual as well as practical, create all those economic arrangements of society, in relation both to those within and to those without, upon which depend the economic policy of every age in general and its commercial policy in particular. We saw that the feeling and recognition of economic solidarity, in regard alike to those within and those without, necessarily created at the same time a corporate egoism. From this egoism the commercial policy of every age receives its impulse.

We have, in the next place, laid emphasis on the proposition that historical progress has consisted mainly in the establishment of ever larger and larger communities as the controllers of economic policy in place of small. The seventeenth and eighteenth centuries seemed to us the birth hour of modern states and modern national economies, and therefore to have been necessarily characterized by a selfish national commercial policy of a harsh and rude kind. Whether such a policy was rightly directed in details depended on the information and sagacity of the personages who guided the state; whether it was to be justified as a whole, whether as a whole it had a probability of success, that depended, then as ever, on the question whether it accompanied a great upward-moving stream of national and economic life.

The progress of the nineteenth century beyond the mercantilist policy of the eighteenth depends—keeping to this thought of a succession of ever-larger social communities—on the creation of leagues of states, on alliances in the matter of customs and trade, on the moral and legal community of all civilised states such as modern international law is more and more bringing into existence by means of a network of international treaties.

But, of course, by the side of this stands another and not less important chain of connected phenomena, which also helps to explain the contrast between the nineteenth century on the one side and the seventeenth and eighteenth on the other. The struggle of social bodies with one another, which is at times military, at other times merely economic, has a tendency, with the progress of civilization, to assume a higher character and to abandon its coarsest and most brutal weapons. The instinct becomes stronger of a certain solidarity of interests, of a beneficent interaction, of an exchange of goods from which both rivals gain. It was in this way that the strife of towns and territories had been softened and moderated with time until, on the foundation of still greater social bodies, the states, it had passed into a moral influence and obligation to educate and assist the weaker members within the larger community.

So the eighteenth-century ideas of a human cosmopolitanism began to instil into men the thought of a change of policy in the economic struggles of European states at the very time when the international rivalry had reached its highest point.

3. NATIONAL ECONOMIC RIVALRY AN ILLUSION

A.[1] MISCONCEPTIONS AS TO THE NATURE OF GOVERNMENT AND THE PLACE OF POLITICAL AUTHORITY

No less a person than Admiral Mahan assures us that the struggle for territory between nations is justified economically by the fact that just as a steel trust has an advantage in owning its own ore fields, its stores of raw material, so a country has an advantage in owning colonies and conquered provinces. We see at once the idea: the nation is a commercial corporation like a steel trust.

[1] By Norman Angell. Adapted from *The Problems of the War—and the Peace*, pp. 58–62. Copyright by William Heinemann, London.

Ed. Note.—Norman Angell (Norman Angell Lane) (1874—) is a prominent British journalist and author of a number of books on subjects connected with militarism, representing the cosmopolitan and anti-militarist wing of British thought.

Well, of course, a moment's reflection shows us that the analogy is an absolutely false one; that these pictures of nations as rival units competing one against the other bear no sort of resemblance to the facts. To begin with, the nations, except in so far as the carrying of letters and in some cases the manufacture of matches and tobacco are concerned, are not commercial corporations at all, but political and administrative ones, with functions of a like kind to those possessed by our villages, towns, or counties; and Germany no more competes with Britain than Birmingham does with Sheffield. It is not the state which owns and exploits the ore fields or farms or factories in the way that the steel trust owns its sources of raw material. The state merely polices and guarantees possession to the real owners, the shareholders, who may be foreigners. The mere fact that the area of political administration would be enlarged or contracted by the process which we call conquest has little more direct bearing upon such economic questions as the ownership of raw material by the populations concerned than the enlargement of a town's area by the inclusion of outlying suburbs would have upon the trading of the citizens of such towns. It is of course conceivable that they, or some, might incidentally gain or incidentally lose; but an increase of wealth is no necessary consequence of the increase of municipal territory.

Not merely is it untrue to represent the nation as carrying on trade against other nations, untrue to represent the state as a corporation carrying on the trade of its people, but it is just as untrue to represent the nations as economic units in the field of international trade. We talk and think of "German" trade as competing in the world with "British" trade, and we have in our mind that what is the gain of Germany is the loss of Britain, or vice versa. It is absolutely untrue. There is no such national conflict, no such thing as "British" trade or "German" trade in this sense. An ironmaster in Birmingham may have his trade taken away by the competition of an ironmaster in Essen, just as he may have it taken away by one in Glasgow, or Belfast, or Pittsburgh, but in the present condition of the division of labour in the world it would be about as true to speak of Britain suffering by the competition of Germany as it would be to talk of light-haired people suffering by the competition of the dark-haired people, or of the fact that those who live in houses with even numbers are being driven out of business by those who live in odd-numbered houses. Such delimitations do not mark the economic

delimitations; the economic function cuts athwart them; the frontiers of the two do not coincide; and though we may quite legitimately prefer to see a British house beat a German one in trade, that victory will not necessarily help our group as a whole against his group as a whole.

When we talk of "German" trade in the international field, what do we mean? Here is an ironmaster in Essen making locomotives for a light railway in an Argentine province (the capital for which has been subscribed in Paris), which has become necessary because of the export of wool to Bradford, where the trade has developed owing to the sales in the United States, due to high prices produced by the destruction of sheep runs owing to the agricultural development of the West. But for the money found in Paris (due perhaps to good crops in wine and olives sold mainly in London and New York) and the wool needed by the Bradford manufacturer (who has found a market for blankets among miners in Montana, who are smelting copper for a cable in China, which is needed because the encouragement given to education by the Chinese Republic has caused Chinese newspapers to print cable news from Europe)—but for such factors as these and a whole chain of equally interdependent ones throughout the world, the ironmaster in Essen would not have been able to sell his locomotives. How, therefore, can you describe it as part of the trade of "Germany" which is in competition with the trade of "Britain," or "France," or "America"? But for the British, French, and American trade it could not have existed at all. You may say that if the Essen ironmaster could have been prevented from selling his locomotives the trade would have gone to a British one. But this community of German workmen, called into existence by the Argentine trade, maintains by its consumption of coffee a plantation in Brazil, which buys its machinery in Sheffield. The destruction, therefore, of the Essen trade, while it might have given business to the British locomotive maker, would have taken it from, say, a British agricultural implement maker. The economic interests involved sort themselves irrespectively of the national groupings.

What, of course, we fail to realise in this connection is that trade is necessarily exchange; if we are to sell anything to anyone the buyer must have money. Roughly, and largely in the European nations, he is a customer to the extent that he is a competitor. It is a noteworthy fact, the full significance of which I have not space to deal with now, that it is occasionally those nations which most resemble one another in their industrial make-up that are mutually the best

customers. Great Britain sells more per head of population to Belgium, a highly industrialised nation, than to Canada or Russia, mainly agricultural nations.

What, I am dealing with here is not an ignorance of certain statistical facts, or a failure to understand certain obscure points in economics; not the use of mere loose language, but a fundamentally untrue conception, a false picture of the state in its relation to the economic activities of its people.

B.[1] POLITICAL VERSUS ECONOMIC UNITS

Co-operation between nations has become essential for the very life of their peoples. But that co-operation does not take place as between states at all. A trading corporation "Britain" does not buy cotton from another corporation "America." A manufacturer in Manchester strikes a bargain with a merchant in Louisiana in order to keep a bargain with a dyer in Germany, and three or a much larger number of parties enter into virtual, or perhaps actual, contract and form a mutually dependent economic community (numbering, it may be, with the work people in the groups of industries involved, some millions of individuals)—an economic entity so far as one can exist which does not include all organized society. The special interests of such a community may become hostile to those of another community, but it will almost certainly not be a "national" one, but one of a like nature, say a shipping ring or groups of international bankers or stock-exchange speculators. The frontiers of such communities do not coincide with the areas in which operate the functions of the state. How could a state, say Britain, act on behalf of an economic entity such as that just indicated? By pressure against America or Germany? But the community against which the British manufacturer in this case wants pressure exercised is not "America" or "Germany"—both Americans and Germans are his partners in the matter. He wants it exercised against the shipping ring, or the speculators, or the bankers, who in part are British. If Britain injures America and Germany as a whole she injures necessarily the economic entity which it was her object to protect.

This establishes two things, therefore: the fact that the political and economic units do not coincide and the fact, which follows as a consequence, that action by political authorities designed to control

[1] By Norman Angell (see p. 9). Adapted from *Arms and Industry*, pp. xviii–xxvi. Published by G. P. Putnam's Sons, 1914.

economic activities which take no account of the limits of political jurisdiction is necessarily irrelevant and ineffective. The assumption that states are economically rivals and that economic advantage accrues to the possession of political power based on military force postulates communities capable of political and geographical limitation that are self-contained, and postulates also the effective control of the social and economic activities of other similar communities by the military force of our own. The great nations of modern Europe have passed out of that stage of development in which such a conception bears even a distant relation to the facts. This condition carries with it the intangibility of wealth so far as foreign state action is concerned, because any state destroying wealth in another must destroy wealth in its own, since the unit intersects the two areas.

On the economic side this development is relatively modern—its vital form belongs to our generation. The prime factor therein has, of course, been the improvement of communication and the cheapening of transport, setting up a division of labour, with its consequent interdependence and solidarity of interest, between groups situated in different nations, thus rendering hostility based on the lines of political geography irrelevant to real collision of interest and moral conflict. It is by the fact of having set up this process, and not by the fact of having brought people of different nations into touch, that improved communication is transforming the character of international relations.

The weight of an unexamined and obsolete political terminology is, though extremely subtle, powerful. A professor of history and a student of constitutional law in a great university once thought to score a point by asking, "Were those who believed that possession of extended territory did not enrich a people prepared to see Great Britain give away Canada?" He was asked how he supposed Great Britain could "give away" the inhabitants of Canada, and what proprietary right she possessed in those eight million human beings?

Both the phrases and the pictures which they imply are of course an historical survival from a time when a colonial "plantation" was really somebody's possession (the monopoly of some company of trading adventurers or a Court favourite); or from a still earlier time when political "ownership" was a quite real thing from the point of view of some reigning family to whom a country was an estate; or from the period in Europe when the trade of "government" was as

much the professional interest of an oligarchic group as banking or cotton-spinning are definite industrial interests of our day.

We have here then two factors: the general currency of words and pictures that were created to indicate conditions that have passed away, and the interpretation of these words and pictures by people compelled by the inevitable circumstances of their lives to form their political conceptions hurriedly and superficially—from the newspaper headline or the vague chatter of smoking-room leisure.

II. The Pressure of Population

1. BIRTH-RATES AND INTERNATIONAL RIVALRY[1]

A century ago Malthus startled the world by demonstrating that our race naturally multiplies faster than it can increase its food supply, with the result that population tends ever to press painfully upon the means of subsistence. So long as mankind reproduces freely, numbers can be adjusted to resources only by the grinding of destructive agencies, such as war, famine, poverty, and disease. To be sure, this ghastly train of ills may be escaped if only people will prudently postpone marriage. Since, however, late marriage calls for the exercise of more foresight and self-control than can be looked for in the masses, Malthus painted the future of humanity with a somberness that gave political economy its early nickname of the "dismal science."

Malthus is not in the least "refuted" by the fact that during his century the inhabitants of Europe leaped in number from one hundred and eighty-seven millions to four hundred millions, with no increase, but rather diminution, of misery. It is true, unprecedented successes in augmenting the food supply have staved off the overpopulation danger. Within a lifetime, not only have the arts of food raising made giant strides, but, at the world's rim, great virgin tracts have been brought under the plow, while steam hurries to the larders of the Old World their surplus produce. But such a bounty of the gods is not rashly to be capitalized. While there is no limit to be set to the progress of scientific agriculture, no one can show where our century is to find its Mississippi Valley, Argentina, Canada, or New Zealand

[1] By Edward Alsworth Ross. Adapted from *Changing America*, pp. 32–49. Copyright by Century Co., 1912.

Ed. Note.—E. A. Ross (1866—) is professor of sociology at the University of Wisconsin and one of the most prominent American sociologists.

to fill with herds or farms. The vaunted plenty of our time adjourns but does not dispel the haunting vision of a starving race on a crowded planet.

Nevertheless the clouds that hung low about the future are breaking. The terrible Malthus failed to anticipate certain influences which in some places have already so far checked multiplication as to ameliorate the lot of even the lower and broader social layers. The sagging of the national birth-rate made its first appearance about fifty years ago in France, thereby giving the other peoples a chance to thank God they were not as these decadent French. But the thing has become so general that today no people dares to point the finger of scorn. In 1878 the fall of the birth-rate began in England. During the eighties it invaded Belgium, Holland, and Switzerland. In 1889 it seized with great virulence upon Australia. Just before the close of the century Finland, Italy, and Hungary fell into line. In Germany and Austria it is only within four or five years that the economists have begun to discuss "our diminishing fecundity." In all Christendom only Russia, the Balkan States, and French Canada show the old-fashioned birth-rates of forty, fifty, or even fifty-five per thousand. The tendency in the United States is best revealed in the diminishing number of children under five years to each thousand women of child-bearing age. The decline from 1860 to 1890 is 24 per cent.

Owing to the fact that the death-rate has been falling even faster than the birth-rate there is, so far, no slackening in the growth of numbers. Indeed, part of the fall in the birth-rate merely reflects the increasing proportion of aged.

The supreme service of forethoughted parenthood is that it bids fair to deliver us from the overpopulation horror, which was becoming more imminent with every stride in medicine or public hygiene. Most of the Western peoples have now an excess of births over deaths of 1 per cent a year. If even a third of this increase should find a footing oversea, then home expansion would still be such that at a future date, no more remote from us than the founding of Jamestown, Europe would groan under a population of three billions, while the United States of that day, with twice as many people as Europe now has, would be to China what China is to the present United States. Besides its attendant misery and degradation, population pressure sharpens every form of struggle among men—competition, class strife, and war—and the dream of a moral redemption of our race would

vanish into thin air if the enlightened peoples had failed to meet the crisis created by the reduction of mortality.

Now that cheap travel stirs the social deeps and far-beckoning opportunity fills the steerages, immigration becomes ever more serious to the people that hopes to rid itself at least of slums, "masses," and "submerged." What is the good of practising prudence in the family if hungry strangers may crowd in and occupy at the banquet table of life the places reserved for its children? Shall it, in order to relieve the teeming lands of their unemployed, abide in the pit of wolfish competition and renounce the fair prospect of a growth in suavity, comfort, and refinement? If not, then the low-pressure society must not only slam its doors upon the indraught, but must double-lock them with forts and ironclads lest they be burst open by assault from some quarter where "cannon food" is cheap.

The rush of developments makes it certain that the vision of a globe "lapt in universal law" is premature. If the seers of the mid-century who looked for the speedy triumph of free trade had read their Malthus aright, they might have anticipated the tariff barriers that have risen on all hands within the last thirty years. So today one needs no prophet's mantle to foresee that presently the world will be cut up with immigration barriers which will never be leveled until the intelligent accommodation of numbers to resources has greatly equalized population pressure all over the globe. The French resent the million and a third aliens that have been squeezed into hollow and prosperous France by pressure in the neighbor lands. The English restrict immigration from the Continent. The Germans feel the thrust from the overstocked Slavic areas. The United States, Canada, Australia, and South Africa are barring out the Asiatic. Dams against the colored races, with spillways of course for students, merchants, and travelers, will presently enclose the white man's world. Within this area minor dams will protect the high wages of the less prolific peoples against the surplus labor of the more prolific.

Assuredly every small-family nation will try to raise such a dam and every big-family nation will try to break it down. The outlook for peace and disarmament is therefore far from bright. One needs but compare the population pressures in France, Germany, Russia, and Japan to realize that even today the real enemy of the dove of peace is not the eagle of pride or the vulture of greed, but the stork!

2. POPULATION LIMITS AND SOCIAL DECAY[1]

Thus far attention has been especially invited to these facts:

1. The population of the world prior to 1800 was comparatively small.

2. The increase from age to age was exceedingly slow, and the general tendency of humanity to maintain rather small numbers showed no striking change.

3. During the century from 1800 to 1900 the hindrances to the increase of human beings, in general the same as those established by nature to limit the increase of other living creatures, were largely overcome by civilized man; and in addition entirely new industrial conditions developed which offered means of support for many millions of people.

4. In consequence the number of human beings on the globe increased to an extraordinary degree, and at the close of the nineteenth century the population of the world exceeded a billion and a half.

5. Principally, under the influence of industrial activity, mankind has tended more and more to concentrate in large cities.

But if a variety of causes have contributed to invite very large human increase in a comparatively brief period, does it also follow that these influences will never spend themselves, and that a liberal increase of world-population will continue indefinitely? An affirmative answer to this question does not appear to be reasonable. If, for example, the increase of world-population should continue at the nineteenth-century rate, five hundred years later, in 2400, the world would be supporting thirteen and one half billions of human beings.

It must be remembered that as increase of population progresses the mere fact of increase creates new conditions. These in turn may check or destroy earlier tendencies. Thus out of the great increase in population in our time has come already at least one significant fact. This may be termed "the pressure of population." It is the general, instinctive, realization of large numhers. Expression of this realization appears in the decreasing belief that personal responsibility rests on the individual to rear a large family, or even, in many cases, to become a parent. Mere numbers—the pressure of humanity on all

[1] By William S. Rossiter. Adapted from "The Pressure of Population," *Atlantic Monthly*, CVIII (1911), 838–43. Copyright by the Riverside Press.

Ed. Note.—William S. Rossiter (1861—) is an American publisher and author whose works include two volumes on population statistics.

sides, especially in the large cities—constitute ever-present evidence to the average man and woman that there are people enough and that the struggle for existence is too severe already to be increased by unnecessary burdens. In consequence there has arisen a rather remarkable and widespread tendency, now clearly evident in most of the large communities of Europe, voluntarily to limit the family. The effect of this tendency is most marked in France, where it has produced a present state of equilibrium of population liable to be changed at any time into a positive national decrease. Limitation of family has also appeared in other parts of the world, and has caused much concern in Australia, where a very small total white population is shown. It should not be overlooked, however, in connection with the apparently exceptional problem presented by Australia, that the southern Continent seems never to have sustained a large population. The aborigines of Australia, New Zealand, and Tasmania were not numerous, and those that remain are dying out so rapidly as to suggest a very frail racial grasp upon existence.

In the United States the conditions have tended more and more to approximate those of Europe. From the pioneer stage which prevailed when Malthus called attention to the phenomenal fertility of many American communities the nation has advanced so far and with such rapidity that the change constitutes one of the marvels of the age. By a sort of forced draught, secured with the assistance of all Europe, the United States has attained an eighteen-fold increase in population in one hundred years. The national policy during this era of feverish development may be summed up as a continuous and successful attempt to compress the normal national growth of a long period into a few decades.

In consequence of a century of such increase of numbers, accompanied by an ever-increasing congestion in urban centers, it is not strange that in the United States also has appeared the modern tendency to limit the family. It has become so general, indeed, in many sections that the effect upon the states and the nation in all probability would be more evident even than it is in France if it were not concealed by immigration. Substantially all the national increase is now contributed by the later stock, by persons born in other countries and by their children.

The conditions and practice here alluded to have been aggressively and very justly assailed as being destructive to domestic happiness,

character-building, and national stability. To these assertions there can be no effective reply.

The large family has been and is one of the principal sources of the finer elements of American character. The United States is what it is today because of large families. Their decrease should be a cause of much concern. It is useless, however, to ignore world-tendencies. If, in response to a conscientious conviction that larger families were proper and necessary for the welfare of the nation, the American people should increase the proportion of children to that which prevailed in 1790, there would be added nearly 16,000,000 to the total population. The continuation of this rate of increase added to the present actual increase (derived largely from external sources) would advance the population of the United States by leaps and bounds. Without radical change in the wants and consumption of each individual—in other words, without an economic revolution—such increase obviously could not long continue.

But if, as thus suggested, the race is now becoming obedient to new population influences, whither do they lead us? In the past the crude limitations of population incidentally tended to strengthen the character and increase the endeavor of those who survived. In this age, by wonderful invention and achievement, we have directly stimulated increase in numbers; but if in so doing we have brought into operation new forces or influences which in turn war insidiously against further pronounced increase, we may have entailed much ultimate injury upon society by affecting one of the main sources of human strength and progress. When individuals of both sexes, oppressed by the density of population on all sides and convinced that the race is increasing without their aid, or that it already is too numerous without increase, feel themselves absolved from the performance of the supreme natural function, society is confronted with a problem of the gravest importance. The avoidance of having children has become already so general that the man of intelligence and influence who rears a large family is now both exceptional and courageous. Thus the age-old instinct, for the quickening of which far-sighted statesmen in this and other countries are pleading, seems to have been dulled. The energy which under the old conditions was devoted to the rearing of children is now largely turned in other directions. It seldom benefits the state and society, but is generally expended upon some form, however innocent, of self-gratification.

If the large family is the most wholesome state for society, then its decline must be a distinct loss. Moreover this loss comes at a period of time when more and better men are needed than in any previous period. Never before has the race been called upon to administer and increase such a vast accumulation of knowledge or to deal with such a complexity in the social order.

These considerations suggest that perhaps the human race, in its magnificent endeavor in this age, has in reality overreached itself and sown the seeds of decay. It is possible to imagine stationary, and then decreasing, population as becoming at length world-wide, and finally a distinct downward movement of the race, as though humanity were burnt out by overexcitement, wealth, and excess. Mankind is no longer young; is the race to be always virile?

3. A STATIONARY POPULATION AND PROSPERITY[1]

In the United States we have seen that the workingman is already being compelled to take smaller wages, measured in terms of food, than he received a few years ago. The pressure upon food has begun to be felt in this country, where conditions have been very good until the last few years. Is this also the case with the European countries? For the United Kingdom we can answer this question definitely. Wages will purchase about 8.0 per cent less food in 1910 than in 1900. The decrease is not quite so large as in the United States, but it is more significant, because the English laborer was nearer the subsistence level in 1900 than the American laborer. That the pressure is being felt in the United Kingdom is also attested by the fact that immigration was much larger in the decade 1900–1910 than in the previous decade. There can be no doubt that the British laborer is being affected by the fact that a larger and larger proportion of his food comes from foreign lands and is increasingly difficult to obtain.

In France we find that the situation is not so serious as in these other countries. Prices have increased in the last decade, but not as much as in the United States and Germany, and just about the same as in the United Kingdom. Wages have increased faster than prices for most of this decade. Thus it is evident that the situation

[1] By Warren S. Thompson. Adapted from Columbia University Studies in Political Science, Vol. LXIII, No. 3, *Population: A Study in Malthusianism*, pp. 156–64. Copyright by Warren S. Thompson, 1915.

Ed. Note.—Mr. Thompson is a member of the department of sociology at the University of Michigan.

of the French workingman is better today than it has been in the past. As far as our data permit of generalization we can say that France is the only country in which wages have kept ahead of prices since 1900. What are the differences between France and these other countries which will account for this relatively better situation of the French workingman?

In addition to the restriction of population, the fact that a larger proportion of the population of France than of most of the great industrial countries is engaged in agriculture will help to account for the state of general well-being among the masses of the French people. France has not attempted to compete for industrial and commercial supremacy and therefore has avoided the costs of this competition. It is only within a few years that these costs have come to be felt keenly in the United States and Germany; they have been felt for a longer time in Great Britain.

Because population is about stationary and because living conditions are relatively good many of the French economists view the position of France with great apprehension. The reasons for this apprehension are not far to seek. In the first place, they fear that immigration of peoples with lower standards of living from surrounding countries will take place on a large scale, and that these immigrants will multiply so rapidly that they will denationalize the French. In the second place, they fear that the nations to the east of them will soon be able to conquer them because their populations are increasing so rapidly.

Another conclusion which seems to me to be warranted is that population cannot continue to increase at its present rate without being more and more subjected to the actual want of food, provided the distribution of labor between agriculture and the non-agricultural industries continues in its present trend (the trend found in the more highly developed countries). Nor can a greater and greater proportion of the population be devoted to agriculture and the present rate of increase continue without checking a progressive standard of living. The non-agricultural industries are not yielding increasing returns in such ratio that they can furnish the necessary material means for a progressive standard to such a rapidly increasing population. Thus, whatever the direction of development, a progressive standard of life and a population increasing from 1.5 per cent to 2.0 per cent a year cannot go on together for long in a large part of the world.

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III. Economic Imperialism

1. A SUMMARY VIEW OF *MACHTPOLITIK*[1]

War is a biological necessity of the first importance, a regulative element in the life of mankind which cannot be dispensed with, since without it an unhealthy development will follow which excludes every advancement of the race and therefore all real civilization.

The nation is made up of individuals, the state of communities. The motive which influences each member is prominent in the whole body. It is a persistent struggle for possessions, power, and sovereignty which primarily governs the relations of one nation to another, and right is respected so far only as it is compatible with advantage. So long as there are men who have human feelings and aspirations, so long as there are nations who strive for an enlarged sphere of activity, so long will conflicting interests come into being and occasions for making war arise.

The natural law, to which all laws of nature can be reduced, is the law of struggle. All intra-social property, all thoughts, inventions, and institutions, as indeed the social system itself, are a result of the intra-social struggle, in which one survives and another is cast out. The extra-social, the super-social, struggle which guides the external development of societies, nations, and races, is war.

That social system in which the most efficient personalities possess the greatest influence will show the greatest vitality in the intra-social struggle. In the extra-social struggle, in war, that nation will conquer which can throw into the scale the greatest physical, mental, moral, material, and political power and is therefore the best able to defend itself. War will furnish such a nation with favourable vital conditions, enlarged possibilities of expansion, and widened influence, and thus promote the progress of mankind; for it is clear that those intellectual and moral factors which insure superiority in war are also those which render possible a general progressive development. They confer victory because the elements of progress are latent in them. Without war inferior or decaying races would easily choke the growth of healthy, budding elements, and a universal decadence would follow.

[1] By F. von Bernhardi. Adapted from *Germany and the Next War*, pp. 18–108. Published by Longmans, Green & Co., 1914.

Ed. Note.—General von Bernhardi (1849—) is an authority on cavalry tactics, and the book from which this extract is made is an attempt to arouse German opinion to the most extreme militarist point of view.

Strong, healthy, and flourishing nations increase in population. From a given moment they require a continual expansion of their frontiers; they require new territory for the accommodation of their surplus population. Since almost every part of the globe is inhabited, new territory must, as a rule, be obtained at the cost of its possessors—that is to say, by conquest, which thus becomes a law of necessity.

In America, England, and Germany, to mention only the chief commercial countries, industries offer remunerative work to great masses of the population. The native population cannot consume all the products of this work. The industries depend, therefore, mainly on exportation. Work and employment are secured so long as they find markets which gladly accept their products, since they are paid for by the foreign country. But this foreign country is intensely interested in liberating itself from such tribute and in producing itself all that it requires. We find, therefore, a general endeavor to call home industries into existence and to protect them by tariff barriers; and on the other hand the foreign country tries to keep the markets open to itself, to crush or cripple competing industries, and thus to retain the consumers for itself or win fresh ones. It is an embittered struggle which rages in the markets of the world. It has already often assumed definite hostile forms in tariff wars, and the future will certainly intensify this struggle. Great commercial countries will, on the one hand, shut their doors more closely to outsiders, and countries hitherto on the downgrade will develop home industries, which, under more favorable conditions of labour and production, will be able to supply goods cheaper than those imported from the old industrial states. These latter will see their position in the world-markets endangered, and thus it may well happen that an export country can no longer offer satisfactory conditions of life to its workers. Such a state runs the danger, not only of losing a valuable part of its population by emigration, but also of gradually falling from its supremacy in the civilized and political world through diminishing production and lessened profits.

In this respect we stand to-day at the threshold of a development. We cannot reject the possibility that a state, under the necessity of providing remunerative work for its population, may be driven into war.

Under these conditions the position of Germany is extraordinarily difficult. We not only require for the full material development of our nation, on a scale corresponding to its intellectual importance,

an extended political basis, but, as has just been explained, we are compelled to obtain space for our increasing population and markets for our growing industries. But at every step which we take in this direction England will resolutely oppose us. English policy may not yet have made the definite decision to attack us; but it doubtless wishes, by all and every means, even the most extreme, to hinder every further expansion of German international influence and of German maritime power.

Since the struggle is, as appears on a thorough investigation of the international question, necessary and inevitable, we must fight it out, cost what it may. Indeed, we are carrying it on at the present moment, though not with drawn swords, and only by peaceful means so far. On the one hand, it is being waged by the competition in trade, industries, and warlike preparations; on the other hand, by diplomatic methods with which the rival states are fighting each other in every region where their interests clash. With these methods it has been possible to maintain peace hitherto, but not without considerable loss of power and prestige. This apparently peaceful state of things must not deceive us; we are facing a hidden, but none the less formidable, crisis—perhaps the most momentous crisis in the history of the German nation. We have fought in the last great wars for our national union and our position among the Powers of *Europe;* we now must decide whether we wish to develop into and maintain a *World Empire* and procure for German spirit and German ideas that fit recognition which has been hitherto withheld from them. Have we the energy to aspire to that great goal? Are we prepared to make the sacrifices which such an effort will doubtless cost us? Or are we willing to recoil before the hostile forces and sink step by step lower in our economic, political, and national importance? That is what is involved in our decision.

There is no standing still in the world's history. All is growth and development. We must make it quite clear to ourselves that there can be no standing still, no being satisfied, for us, but only progress or retrogression, and that it is tantamount to retrogression when we are contented with our present place among the nations of Europe while all our rivals are straining with desperate energy, even at the cost of our rights, to extend their power. The process of our decay would set in gradually and advance slowly so long as the struggle against us was waged with peaceful weapons; the living generation would perhaps be able to continue to exist in peace and comfort. But

should a war be forced upon us by stronger enemies under conditions unfavourable to us, then, if our arms met with disaster, our political downfall would not be delayed and we should rapidly sink down. The future of German nationality would be sacrificed, an independent German civilization would not long exist, and the blessings for which German blood has flowed in streams—spiritual and moral liberty and the profound and lofty aspirations of German thought—would for long ages be lost to mankind.

If, as is right, we do not wish to assume the responsibility for such a catastrophe we must have the courage to strive with every means to attain that increase of power which we are entitled to claim, even at the risk of a war with numerically superior foes.

We must employ means also for the widening of our colonial territory, so that it may be able to receive the overflow of our population. Very recent events have shown that under certain circumstances it is possible to obtain districts in equatorial Africa by pacific negotiations. If necessary they must be obtained as the result of a successful European war. In all these possible acquisitions of territory the point must be strictly borne in mind that we require countries which are climatically suited to German settlers. Now there are, even in Central Africa, large regions which are adapted to the settlement of German farmers and stock-breeders, and part of our overflow population might be diverted to those parts. But, generally speaking, we can only obtain in tropical colonies markets for our industrial products and wide stretches of cultivated ground for the growth of the raw materials which our industries require. This represents in itself a considerable advantage, but does not release us from the obligation to acquire land for actual colonization.

A part of our surplus population indeed—so far as present conditions point—will always be driven to seek a livelihood outside the borders of the German Empire. Measures must be taken to the extent at least of providing that the German element is not split up in the world, but remains united in compact blocks and thus forms, even in foreign countries, political centres of gravity in our favour, markets for our exports, and centres for the diffusion of German culture.

An intensive colonial policy is for us especially an absolute necessity. It has often been asserted that a "policy of the open door" can replace the want of colonies of our own and must constitute our programme for the future just because we do not possess sufficient colonies. This notion is justified only in a certain sense. In the

first place, such a policy does not offer the possibility of finding homes for the overflow population in a territory of our own; next, it does not guarantee the certainty of an open and unrestricted trade competition. It secures to all trading nations equal tariffs, but this does not imply by any means competition under equal conditions. On the contrary, the political power which is exercised in such a country is the determining factor in the economic relations. The principle of the open door prevails everywhere—in Egypt, in Manchuria, in the Congo State, in Morocco—and everywhere the politically dominant power controls the commerce: in Manchuria, Japan; in Egypt, England; in the Congo State, Belgium; and in Morocco, France. The reason is plain. All state concessions fall naturally to that state which is practically dominant; its products are bought by all the consumers who are in any way dependent on the power of the state, quite apart from the fact that by reduced tariffs and similar advantages for the favoured wares the concession of the open door can be evaded in various ways. A "policy of open door" must at best be regarded as a makeshift and as a complement of a vigorous colonial policy. The essential point is for a country to have colonies of its own and a predominant political influence in the spheres where its markets lie. Our German world-policy must be guided by these considerations.

2. INDUSTRIAL PENETRATION[1]

Certain thinkers tell us: "It is not true that economic causes played a preponderant part in the explosion of last July. Germany was not threatened by overpopulation, she had no urgent need of colonies." But the truth is, that what counts in the history of humanity is not the actual facts but the form in which men picture them to their minds. Political economy and history are in their essence psychological sciences. What we are concerned to know is not whether Germany was actually suffocating; Germany thought she was suffocating, she yielded—to use the very words of one of those who contradict us—to the haunting fear of aggressive "encircle-

[1] By Henri Hauser. Adapted from "Economic Germany," a lecture given on April 10, 1915. Printed by Thomas Nelson & Sons, 1915.

Ed. Note.—Henri Hauser (1866—) is professor of modern history and geography at the University of Clermont and author of numerous works, including a

ment," which she felt bound to shatter at all costs. It is this "pathological phenomenon of collective psychology" which we must attempt to explain.

I. THE EVOLUTION OF GERMAN INDUSTRY

What strikes us at the very outset in the evolution of German industry is the actual greatness of the phenomenon. There is something impressive in the spectacle of this people, which forty years ago scarcely counted at all in economic geography, and yet had become on the eve of the war one of the great forces of the world. With her 900 to 1,000 millions of foreign commerce Germany reckoned in the second rank of mercantile nations, after England. Outstripping England herself she had achieved the second place in the smelting and production of iron and the second also in the manufacture of steel. Her mercantile marine, inferior to ours [the French] in 1870, was in 1913 surpassed only by those of England and the United States.

All this won our admiration. . . . . We do not hesitate to recognize that the German people, since the foundation of the Empire, have given proof of remarkable qualities. First and foremost they have worked with intense energy, not with the feverish excitement which raises mountains in a few days, but with persistent and patient everyday labour, regular and methodical. Ostwald is right when he attributes to the Germans the faculty and genius for organization. They have carried to perfection the art of making use of men, of putting every man in his place, and of getting the maximum of output from each individual. If the genius for great discoveries seems in recent times to have deserted Germany, the Germans are past masters in the application of the discoveries of science to industry. The statement has often enough been made: It is the union of the laboratory and the workshop which is the foundation of German wealth. This truth was emphasized in 1897 by M. Raphael-Georges Levy. In an article in the *Revue des deux mondes*, which was a revelation to many Frenchmen, he wrote:

> The sphere in which science wins its triumphs is that of industry. It is difficult to find a more striking demonstration of this truth than that furnished by the chemical industry of Germany. That industry came from the laboratories of great men of science, such as Liebig and Hoffman, and its continued prosperity is due to the incessant co-operation of hundreds of chemists who come every year from the Universities. . . . . Germany is covered with laboratories, several of which have cost £25,000, and the yearly upkeep of which requires hundreds of thousands.

Side by side with the union between laboratory and workshop it is necessary to call attention to the union between the office of the business director and the library of the economist, the geographer and the historian. For the method which the Germans applied to the production of a new aniline colour they also carried into their search for commercial outlets and their organization of channels of commerce. The German chemist and the German commercial traveller marched in step to the conquest of the globe.

This rise of Germany was a great and, we are prepared to say, in a certain sense a fine spectacle; but its very rapidity contained an element which gave some ground for anxiety.

The evolution of Germany has borne a startling and almost catastrophic character. From the complex of agricultural states, dotted with industrial patches, which constituted the Zollverein in 1870, the industrial Empire has sprung up in a few years by a sort of historical "right-about-face," without any of that slow and secular preparation which marked the rise, for instance, of the English power. Time has had no share in producing industrial Germany. . . . . In 1895 the income from the fortunes of the Empire was estimated at 21 milliards; in 1913 the estimate varied from 40 to 50 milliards, while the wealth of Germany was estimated at 320 milliards, of which nearly 9.5 consisted of deposits in banks and 18 in savings banks. Such are the figures proudly produced by Dr. Helfferich, director of the Deutsche Bank, the present minister of finance of the King of Prussia, at the twenty-fifth anniversary of the accession of William II.

This sudden increase in German wealth had very serious consequences for the character and distribution of the population of Germany. The two most notable results were the progressive disappearance of the rural population and the abrupt cessation of emigration. It is repeatedly stated that the Germans were forced into a policy of expansion and conquest by the increase of their population. This was indeed the excuse they put forward to justify their attempts to create colonies of settlement in Morocco and Asia Minor. A pitiless Malthusian law had forced them, it was said, to find for themselves a "place in the sun." Now there could be no idea more false than this of Germany as an overpopulated country. It is quite true that since 1871 the population of the Empire has increased from 40 to nearly 70 millions. It is quite true that in spite of a decline in the birth-rate the increase in the population of Germany was 800,000 a year: that is, 800,000 more births than deaths, 800,000

more mouths to feed. But this increase was far from being excessive, for every year 700,000 Slav labourers came in to work on the great estates of the East, not to mention the Italian, Croatian, Polish, etc., labour employed in towns, mines, and works.

As for German emigration it is no longer more than a memory. Between 1880 and 1883 it exceeded 200,000 a year; to-day it does not reach 20,000, very much the same figure as our own, and the French are regarded as a people who emigrate very little. The number of arrivals far exceeds that of departures. Germany has ceased to be a country of emigration and is becoming a country of immigration.

Out of 67 million Germans scarcely 17 millions are agricultural or live on agriculture. Every year an enormous number of peasants quit the land and rush into colossal factories. Germany has definitely passed from the type of the agricultural state to that of the industrial state, from the *Agrarstaat* to the *Industriestaat.* The equilibrium between the land and the workshop has been upset.

II. THE INDUSTRIAL STATE AND ITS NEEDS

The industrial state has very imperious needs and requirements which are not shared by the agricultural state; the agricultural state lives on itself and for itself and can live within its own limits. The industrial state, to use the phrase of Lamprecht, is a "tentacular" state.

To begin with, it has need of supplies of food. It is calculated that 20 millions of the 67 millions of Germany depend for their maintenance on foreign harvests and foreign cattle. A dangerous position, since it compels Germany to secure for herself at all times not only free passage over her land frontiers, but, above all, freedom of communication by sea. We know what it costs Germany to-day to be cut off from receiving the wheat of Russia, America, and Argentina.

The industrial state is in pressing need not only of capital but of raw material. Germany, when she entered the lists, was regarded as a country rich in coal and iron. She has remained rich in coal, but by working her iron mines intensively I do not say she has exhausted them, but she can no longer extract from them the total amount of ore required by her metallurgical works. Krupp is more and more dependent on Sweden, Spain, North Africa, and France. In the same way the spinning and weaving factories of Saxony and Silesia are dependent on Texas and Louisiana. If Sweden, which has

nationalised her mines, puts barriers on the export of her ores, or the price of corn undergoes an abnormal rise in the market of New Orleans, it means famine for the crowds which throng into the Westphalia district or to the north of the Bohemian mountains.

Raw cotton bulks larger than any other article imported into Germany, to the amount of considerably more than £25,000,000. The cotton industry employs more than 1½ millions of work-people and manufactures goods to the value of more than £50,000,000. Now two-thirds of the raw cotton consumed in the world is supplied by a single country, the United States. In 1894 a syndicate, the "Sully cotton corner," took advantage of this situation to produce an enormous rise of prices and to reserve the cotton for the American factories. On the Bremen exchange, in February, the price paid for cotton was 85 pfennige a pound, while in December, when the corner had been broken up, it fell to 35. Germany lost in the operation £5,850,000 paid to the foreigner. A reduction in the production of cotton textiles and widespread dismissal of workmen were the results of this veritable cotton famine, which at the same time disastrously affected our own industries in the Vosges and in Normandy as well as those of Lancashire.

Customers are necessary to Germany even more than capital. In spite of their power of increase, in spite of their rapid advance in wealth, in spite of their appetite for enjoyment, the German people cannot by themselves alone absorb the enormous output of the German factories. They are bound to turn more and more to the outside world and to become an exporting nation.

All causes then combine to make Germany a tentacular state spreading out in every direction over the world. The general staff of the industrial world needs a "world-policy" to find interest for its capital and to pay the wage of its workmen. The proletariat have need of it to give them a full day's work and save them from starvation. That is why German Socialism is imperialist. Even as early as 1900 the defenders of the Naval Law wrote: "The freedom of the seas and vigorous competition in the markets of the world are therefore questions of life and death for the nation, questions in which the working classes are most deeply interested." Only yesterday the Social Democrat Konrad Hoenisch, ex-member of the Reichstag, exclaimed, "The social interests of the German proletariat even more than political considerations make victory for Germany necessary."

III. INDUSTRY AND WORLD-POLICY ("WELTPOLITIK")

Thus we see the industrial state condemned to world-policy. Its first business is to find means to develop its policy of exports. The first means adopted is the system of bounties. As German industry is working less for the home market than for foreign markets it is logical to sell cheap, sometimes even to sell at a loss, beyond the frontier in order to win new markets and to discourage all competition. Thanks to the system by which the chief economic forces are grouped in *cartels*, the process is easy enough. In 1902 the coke syndicate compelled the German consumer to pay 15*s*. a ton, while at the same time it agreed to sell large quantities abroad at 11*s*. In the second half of 1900 the iron-wire syndicate had sold abroad at 14*s*. per 100 kg., while the home price was 25*s*. It thus made a minus profit on the foreign market, that is, a loss of £42,950, and on the home market a profit of £58,850. This gave a balance on the right side. But this time the trick was overdone, for the result was that German iron was bought up abroad to be re-exported to Germany at a profit. Next to the system of bounties comes that of treaties of commerce, which favour the importation of provisions and of labourers (Slavs, for example), and which secure a moderate tariff for German goods abroad. Such is the basis of the Russo-German Treaty of 1904, the tendency of which was to make Russia an economic colony of Germany.

In order to meet the want of iron, Germany had to conquer new supplies of iron ore. Peaceful conquest to begin with. The expert adviser attached to the commissioners of delimitation in 1871 allowed the iron-ore strata of the Woevre to escape, from ignorance of their real importance, and also because he thought them inaccessible by reason of their depth, unworkable because of their high percentage of phosphorus. But the application of the Thomas process in 1878 converted the Briey Basin into the most important iron field at present being worked in the world. With the iron of Lorraine and Normandy and the coal of Westphalia, Germany would be the mistress of the world. To make sure of this supremacy it was of importance to remove all competition and establish German industry in the very heart of the country of her rivals. A description was given before the war of the extraordinary control acquired by German manufacturers over French works producing chemical materials, electricity, etc. At Neuville-sur-Saône it was the Badische Sodafabrik which, under a French name, provided the madder dye for the red trousers of the

French army. The Parisian Aniline Dye Company was nothing but a branch of Meister, Lucius and Bruning, of Hoechst. We have been told how a Darmstadt company for producing pharmaceutical goods came and established a branch at Montereau in order to destroy a French factory which was there before, and how the General Electric Company got hold of Rouen, Nantes, Algiers, Oran, and Châteauroux.

The same conquests were won at Seville, Granada, Buenos Aires, Montevideo, Mendoza, Santiago, and Valparaiso, while the other great electric company of Germany, the Siemens-Schuckert, established itself at Creil. Turkey, Russia, Italy, and Switzerland shared the fate of France. "The money of the Swiss debenture holder serves to support German undertakings competing with Swiss manufacturers in our own country."

A remarkable study of the same subject in Italy has been made by M. Giovanni Preziosi in some articles which appeared in 1914 under the significant title, *Germany's Plan for the Conquest of Italy*. It was indeed a war of conquest conducted with admirable organizing faculty. At its centre was a financial staff constituted by the "Banca commercialle . . . . italiana," which naturally is called "Italian" just as the companies in France are called "French" or "Parisian." This product of German finance is described as a "Germanic octopus," the very image of the tentacular state before described. Establishing itself within the directing boards and, by means of a system of secret cards, employing a regular system of commercial espionage to ruin all who resist it, it succeeded in gradually absorbing the economic energies of an entire people—establishments of credit, shipping companies, manufacturing firms; it was even able to corrupt political life, overthrow ministries, and control elections. Here, as in Switzerland, the pseudo-Italian German banks "act as a pump which pumps out of Italy and pumps into Germany." Italy, which is considered a poor country, provides capital for rich Germany.

IV. THE PART PLAYED BY THE STATE

To back up this policy of economic conquest the prestige and the strength of the Empire must be put at the service of the manufacturers. To make the state, as the Germans understand it, the instrument of German expansion—this is the meaning of what the Germans have well named the policy of "business and power" (*Handels- und Machtpolitik*).

This fusion of *Weltpolitik* and business policy was peculiarly dangerous for the peace of the world. If imperialism, if the tentacular

state, puts its strength at the disposal of manufacturing interests, the temptation is strong and constant to use this strength to break down any resistance which stands in the way of the triumph of these interests. If a crisis comes which causes a stoppage of work (there are sometimes 100,000 unemployed in Berlin), the neighboring nation which may be held responsible for the crisis has reason to be on its guard. "Be my customer or I kill you" seems to be the motto of this industrial system continually revolving in its diabolical circle: always producing more in order to sell more, always selling more in order to meet the necessities of a production always growing more intensive.

Russia is for Germany both a reservoir of labour and a market. Should Russia in 1917 refuse to renew the disastrous treaty forced upon her in the unlucky days of the Japanese war, should she put an end to the system of passports for agricultural labourers, what would become of German capitalist agriculture, which has been more and more industrialized and is more and more in the hands of the banks: the farming of the great estates of Brandenburg, Pomerania, and Prussia?

France is for Germany a bank and a purveyor of minerals. What a temptation to dip deep into the jealously guarded stocking and fill both hands! What a temptation too to repair the blunder made in the delimitation of 1871! Even in 1911 the *Gazette du Rhin et de Westphalie* put forward the view that the iron ores of Lorraine and Luxembourg ought to be under the same control as those of Westphalia and the Saar. And I am told that the great journals of Paris, when informed of this campaign, refused to take this "provincial journal" seriously, being blind to the fact that it was the organ of the great manufacturers of the Rhineland and of the Prussian staff. What a temptation again to take the port of Cherbourg in the rear from Dielette!

As for England, the direct competitor of Germany in all the markets of the world and manufacturing the same goods, she is the enemy to be crushed. Has she not acquired the habit, and has she not taught it to France, of refusing to lend money to poor states except in return for good orders? The time is beginning to go by when it was possible to do German business in Turkey with French or English gold. Germany's rivals have learnt from her the lesson of *Handels- und Machtpolitik*. But what is to become of Essen, Gelsenkirchen, and all that immense industrial city of which Westphalia consists, if Rumanians, Greeks, Serbians, order their guns and their ironclads, their rails, or their locomotives at Glasgow or at Le Creusot?

Germany thought war preferable to this economic encirclement, and the velvet glove gave place to the mailed gauntlet.

Little by little the idea of war as necessary, of war as almost a thing to wish for, laid hold on the industrial classes. The proof is to be found as early as 1908 in a popular book by Professor Paul Arndt—one of those small shilling books which served to instruct the German mind. All of us, even the best informed, must reproach ourselves for not having studied or studied closely enough these small books which would have made the danger clear to us. In this volume the author, after a paean to German greatness, begins a chapter "On the Dangers of Germany's Participation in World-Wide Trade." He shows that this participation increases Germany's dependence on the foreigner and makes her vulnerable by sea as well as by land. If international relations are disturbed there will be "many workmen without food and much depreciation of capital," and that from causes "in great measure beyond the control of Germany" in countries which may seize the opportunity to weaken Germany. And in a hypothesis which is prophetic he describes the effects of the blockade.

But he accepts without hesitation these risks of the world-policy. "No doubt, if we wish to be and to remain a great people, a world-power, we expose ourselves to serious struggles. But this must not alarm us. There is profound truth in the dictum that man degenerates in peace time. The call to arms is often needed to rouse a world benumbed with apathy and indolence. Those who can look far and deeply into things see that warfare is often a blessing to humanity."

I have shown that the over-rapid industrialisation of Germany has led by a mechanical and fatal process to the German war. If any doubt were felt on the part played by economic causes in this war, it would be enough to look at the picture of German victory as imagined by the Germans in their dreams during the last seven months. It is an industrial victory, a forced marriage between German coal and foreign iron, the reduction of nations into vassals who are to play the part of perpetual customers of the German workshops.

3. THE THEORY OF THE WHITE MAN'S BURDEN[1]

Many assume that trade follows the flag, that dominion is worth while because it stimulates trade. But such is not the actual course

[1] By Abbott Payson Usher. Adapted from "England's Place in the Sun," *Unpopular Review*, VI (July–December, 1916), 313–21. Copyright by Henry Holt & Co., New York.

ED. NOTE.—Mr. Usher is a member of the department of political economy at Cornell University.

of empire. The place in the sun was not deliberately chosen by statesmen, appropriated, and then opened to the trader. England's empire is the result rather than the cause of her industrial and commercial expansion. Sovereignty has been acquired and protectorates declared when commercial contact has created legal and social difficulties that could best be solved through an assumption of power. Few colonies, least of all tropical colonies, are actually sources of net profit. Even if the gains of the traders are large, the administrative expenditure, in most cases, exceeds any possible income. Since the American Revolution the reluctance of the English government to accept colonial responsibilities has been largely due to the keen realization of the cost. When adventurers in India or Africa thought only of the "glorious" imperial future, the secretaries of state in England thought of the burden that must be incurred for administration and defense.

It is not difficult to realize the need of European control in regions whose inhabitants have not progressed beyond the looser forms of tribal government. The need of control in tropical countries which possess organized governments is not so clear. There is much to suggest that it is a work of supererogation. The natives do not always accept the foreign authority with acquiescence, and the subjection of an entire people possessing an organized government is apparently inconsistent with the principles of international law as applied in Europe. Until the present war, at least, we had come to feel that national existence was guaranteed even to the small states. The difference of principle with reference to tropical countries must needs be admitted. It is in part an outcome of the medieval distinction between Christian and non-Christian states. Throughout the period of the expansion of commerce in the East Indies this fundamental assumption dominated political thought. The rights of native rulers were recognized after a fashion, but they were not placed upon a par with the rights of Christian nations. The forms of negotiation and treaty-making were observed, but the substance of treaties with these native rulers was different, usually involving the grant by them of privileges which would never be granted by any European country. Such a distinction would hardly arise to-day on these same grounds, but there are racial and cultural reasons for treating these non-Christians in a different manner. Contact with Europeans almost of necessity involved some grant to them of sovereign powers, because the European traders could not be subjected to native law.

In Europe and the Americas there is sufficient similarity of social organization to make it possible to adopt the idea that every individual must recognize the law of the state within which he is resident. In India and Northern Africa this theory cannot be applied. As in the days of the Germanic invasions of the Roman Empire, each race must be governed by its own laws. Contact with Europeans thus involved the establishment of an *imperium in imperio*. By a process of purely spontaneous growth the European jurisdiction has ultimately absorbed all the functions of government, administering European laws for Europeans and native laws for natives.

Because the goods of the East India Company could not properly enter into the local trade of India, the native princes had granted almost complete exemption from customs. The officials of the Company bought goods on their own account, passed them by the customs barriers as goods of the Company, and then offered them for sale in the local markets at prices far below any figure that could be set by a native trader who had paid heavy duties. It will be evident that the law could be enforced against the officials of the Company only by some English authority, though the chief offense was committed against the laws of the native state. The inevitable complexities of this dual jurisdiction could not be successfully met by officials accustomed to the laxity and corruption common in all oriental states. The maintenance of any substantial government required courts and administrative officials inspired by the highest ideals of honor and capable of exercising effective control over Europeans. It may well be that the English have made many mistakes in India, but there is evidence in plenty to show that the native princes could not have carried on any organized government in the face of the difficulties created by commercial contact with Europe.

The acquisition of dominion is most evidently justified when rights are assumed by Europeans only as a necessary result of long-established commercial contact. English power has developed in such a manner, slowly, and under evident pressure of circumstances. England has frequently avoided assumption of sovereignty and undertaken merely to direct the foreign policy of the native state. This slow growth toward dominion has been due to the absence of rivalries among European nations and to physical and economic obstacles that made it impossible rapidly to develop extensive commerce with the remote interior of the lands open to European influence. Within fifty years the underlying conditions of economic expansion

have changed. The industries of Europe have developed so rapidly that new markets are now eagerly sought. The development of large steam freighters has so lowered rates that distant markets are open to many types of merchandise whose shipment was formerly restricted by cost of carriage. It has become possible to construct railroads without undue expenditure, even in the most remote regions, so that the volume of trade with the interior districts can expand without encountering serious physical obstacles. The only limit to expansion is the purchasing power of the population, and as this is frequently diminished by oppressive taxation or civil disorder, there is an added motive to make an end of native misrule.

In Africa, even if Continental Europe had remained relatively indifferent to commercial expansion, the changed conditions of contact between Europeans and natives would have led to the rapid extension of European dominion. The so-called "partition" of Africa is no doubt largely a result of these new economic conditions. But neither France nor Germany has been indifferent. Their ambitions have created keen political rivalries. The economic basis of expansion can easily be misunderstood, and the incidental character of acquisition of dominion is obscured. There seems to be a lust for power, sometimes as an end in itself, sometimes as a means to commercial development. The boundaries of spheres of influence become a perennial source of political tension, and intrigue to secure favored positions creates an atmosphere of suspicion. Northern Africa and the Persian Gulf have thus become important regions in world-politics. Economic interests have been obscured by the struggle for power, which can be compared only to the struggles of the Dutch, French, and English in the East Indies. At such times political power seems the fundamental basis of commercial development, but the history of the English colonies points unmistakably to the opposite conclusion. Neither in the Spice Islands nor in India did England display much capacity in intrigue or in imperial politics. Her ultimate successes were largely due to the staying powers derived from the economic strength of the English East India Company.

German colonial policy has been different in principle. The acquisition of dominion, or of political privileges just short of actual dominion, has preceded economic development. German imperialism is thus attempting to create an imperial domain by means which have never as yet been successfully employed. In Northern Africa, in Turkey, and on the Persian Gulf, Germany is seeking to secure a

"place in the sun," not because her trade naturally carries her to such markets, but because dominion over tropical lands is presumed to be valuable in and of itself—a means to commercial expansion and a present evidence of power. In each region Germany is discovered to have "economic interests," actual or contingent.

In Morocco, German interests were most substantial, and the entire situation is undoubtedly complex. In Turkey, German commerce could hardly have created any necessity for the thorough penetration of German influence in the government that was revealed by the present war. The Bagdad Railway was, of course, in form an economic enterprise, but the details of the scheme suggest that the most immediate purposes in view were military. The great wheat fields of the foothills north of the Syrian desert were not touched by the railway, because it was cheaper to build the line across the desert, and the Turkish government had guaranteed interest payments on the investment. Similarly in Mesopotamia the line is located where it will be of least immediate economic advantage. The military value of the main line is of course unimpaired by these details of location. One might argue too that the great energy displayed in building the line towards the Egyptian border by way of Jerusalem was indicative of military rather than economic aims.

The economic interests of Germany in the Near East are so largely prospective that it requires much imagination to appreciate the iniquity of England's alleged conspiracy to "throttle German commerce." One is reminded of the famous occasion in the Irish Parliament before the Union, when an enthusiastic orator charged Great Britain with the "murder of ten thousand children that have never been born."

To German statesmen, however, these ulterior economic purposes are definite enough, and those statesmen's conceptions of the economic significance of the Near East are comprehensible enough in the light of current events. Once connection with Turkey is assured through Balkan alliances, the great league of Central Empires would have at their command such varied resources that there could be little possibility of injuring them by maritime blockade. They would not only separate Russia from her European Allies, but would have at their command the products of every climate in substantial abundance. The general character of the entire plan is now evident, but it is also clear that the development of Turkey's economic resources is still a project to be realized only in a distant future.

4. A BRITISH VIEW OF MESOPOTAMIA[1]

MESOPOTAMIA—ITS FUTURE PROSPECTS

Germany claims to be credited with the greatest discovery of modern times. One of her newspapers declared that "the year 1492, when America was discovered, and 1916, when the colossal idea of the new road to India was born, are dates which generations to come will regard as co-equal and epoch-making." It is probably true that the reopening of this old highway will prove to be of equal importance to the world as the discovery of America by Columbus; but the credit of the so-called discovery belongs to Great Britian, who published plans for the opening up of the Euphrates Valley before unified Germany was born.

It is common knowledge that in 1851 we held concessions for the Euphrates Valley Railway. The time, however, was not ripe for the development of this important route, for the retrograde Ottoman Empire blocked the way. We did our utmost to introduce reforms into Turkey, hoping that she would fall into line with European standards and co-operate with civilised nations in the development of an important area of the earth's surface. Germany's evil counsels, however, have tended to frustrate our efforts to secure the reform of Turkish administration, and with the aid of her Bagdad Railway schemes Germany made a deliberate attempt to establish in the most strategic centre of the earth a formidable coalition of irresponsible despotic monarchies from the banks of the Elbe to the banks of the Indus. In spite of her attempts to wreck modern civilisation the world still will be able to make a rapid recovery on one essential condition—that the new highways from West to East shall be kept free from the influence of despotisms that defy the rights of humanity and ignore the fundamental principles of our twentieth-century civilisation.

If the Turks are permitted to govern anybody but themselves, if they continue to command the world's important highways, then humanity will suffer and military despotism may once more regain the ascendant. The maintenance of peace in the East, as well as the progress of Western peoples, depends mainly upon the permanent expulsion of the Turk from the world's highways and the grant of a charter of freedom for the dwellers in Mesopotamia.

[1] By Canon Parfit. Adapted from *Mesopotamia—The Key to the Future*, pp. 28–41. Copyright by Hodder & Stoughton, 1917.

Since the outbreak of war the Germans have completed a new line of railway through Palestine to the Egyptian frontier, and we also have constructed a railway across the Sinaitic Desert to Palestine. There is no doubt, therefore, that the Cape-to-Cairo Railway will soon be connected with the great European and Asiatic systems by a line running through Palestine to Aleppo. Then the old "Silk Street" route from Pekin to the Mediterranean will doubtless be covered more or less with a railway system; and we may consequently anticipate the joining up of rapid communications over these many ancient highways, in practically a straight line from London to India and Australia, from Paris to Pekin, and from Petrograd to the Cape. All these will pass through Aleppo, now the headquarters of Germany's Bagdad Railway schemes, which makes it a matter of vital interest and concern to the millions of the British Empire that Germany's attempts to destroy our shipping coincide with her effort to grasp by force of arms the most important lines of overland communications. It must not be forgotten that these direct overland routes will assume still greater importance with the establishment of aviation stations. We are making wondrous strides in aërial navigation, and when recent inventions are diverted to peaceful purposes, it will be possible, we are told, to send mails and passengers from London to India in three days by aërial navigation in practically a straight line. Lord Montagu suggested a route across Russia to the Punjab, but it is more probable that aviation stations will be established across the continent of Europe and down the Euphrates Valley. If the journey will take but three days from London to India, with plenty of time for rest and sleep on the way, may it not soon be possible for our colonial representatives of the contemplated imperial parliament to come within a week from the shores of Australia to the portals of Westminster? These tremendous changes which are now taking place amongst civilised peoples make it certain that the central portion of the Eastern Hemisphere, which forms a natural connecting link between the three continents of Europe, Asia, and Africa, will undoubtedly become one of the most important portions of the earth's surface. These changes will facilitate the opening up of enormous countries hitherto largely closed to modern commercial enterprise or exploited only by a few adventurous Europeans. The vast populations of Asia and Africa will be able to play a better part in the development of the continents and the progress of humanity. There is plenty of room for everybody; and what a difference it may make to Europe, with the

new facilities afforded to emigration and colonisation, when the Antipodes can be brought so near to the congested areas of European lands!

5. IMMEDIATE ANTECEDENTS IN THE NEAR EAST[1]

We have in the Near East two main lines of politico-economic development, both antecedent in origin to the Balkan wars of 1912–13, but both greatly accelerated by their result. One is the gradual subordination of Turkish nationality to European—and principally German—economic enterprise; the other is the effort of the Triple Agreement to encircle and neutralize the German economic sphere by joining up their competitive spheres and heading it off from further expansion eastward, with Franco-Russian railway schemes cutting across it near its western end and Anglo-Russian railway projects in Persia blocking its eastern end. The question which the Balkan wars have brought within sight is whether the Bagdad railway and the economic development it imports will assure to Germany such control of Asia Minor as was secured over Manchuria by the Russian railway, or whether this economic control will be so countered and crossed by national "democratic" movements and international "diplomatic" moves that it will lead to no more than did the similar economic control over the Balkan Peninsula secured a half-century ago by Austria in the construction of the Oriental Railway to Constantinople. Austria has had to allow Anglo-Russian support of Balkan nationality movements to expel Austrian economic penetration finally[2] from the Balkan Peninsula in this recent War of Coalition. Will Germany be in a similar situation in Asia Minor, say a century hence, and be suffering similar expulsion before an Armenian-Turkish-Arab coalition?

It was the eagerness of the capitalists and concessionaires in the great lending Powers to exploit the situation created by the war that confused and falsified the lines on which the belligerents might otherwise have worked out a more permanent peace. It was the "diplomatic" interventions of imperialist interests, either military or

[1] By George Young. Adapted from *Nationalism and War in the Near East*, pp. 334 ff. Carnegie Endowment for International Peace.

ED. NOTE.—George Young, M.V.O. (1872—), was in the British diplomatic service or in positions of kindred character from 1896 to 1915 and has served at Athens, Constantinople, and Belgrade.

[2] This was written before the present world-war.—ED.

monetary, that displaced or diverted the "democratic" influences that were directing the course of events into an equitable equilibrium. The cost of these interventions has in some cases equaled that of war, and their economic and political effects have been no less striking than if war had been declared. To choose two only as examples: it was Austrian military opposition that drove Serbia out of Scutari and into Monastir, and it was French monetary support that brought Turkey back into Thrace. The economic effect on the Austrian Empire of the mobilization required for this purpose was more disastrous than the effect of active participation in the wars on any of the Allies. The Austrian budget estimated the cost of this mobilization at 16,500,000 pounds, or about what it cost Greece to double its territory and population, while the loss to the national economy of the financial crisis through which Vienna passed as a consequence of this intervention can only be guessed at. The list of bankruptcies alone shows that a war scare and a financial stringency may be more economically expensive to a modern capital than a six months' campaign, ending with an invasion, to such a primitive community as Bulgaria. Then, taking the case of France, we find the Balkan commitments of Paris contributing to a financial crisis there which is none the less severe for having been successfully survived, but which by the time it is liquidated will probably have caused as heavy a drain on French thrift as a campaign on Morocco.

The amount of material and mental capital now invested in the manufacture and marketing of armaments makes this interest one of the most powerful political influences in the world. Though the business is even more international in character than most of the great industries of the world, unlike them it depends for its profits, like any other insurance business, on the prospect of warlike disturbance and not on the promise of peaceful development. Therefore, unlike other industries, it is found in international relations associating with the militarist faction and always ready to use its very considerable control of parties and of the press in order to exploit the alarmist and chauvinist possibilities of any new political development. It does not indeed seem probable that without the alarmist agitation fomented by armament interests and militarist influences the political changes in the Balkan Peninsula would have caused the general augmentation of armaments in Europe that followed the Balkan wars.

IV. Commercial Rivalry and Special Interests

1. DIMINISHING CAUSES OF HOSTILITY[1]

Alongside of the optimistic view that increasing foreign trade is a force making for world-peace, we must place the pessimistic view that all modern wars are essentially commercial, and that war is, in fact, an inevitable concomitant of trade expansion. The latter view appears, indeed, to have the better support from history.

If we wish to understand the relation between foreign commerce and war, we must inquire first of all whether we are justified in treating commerce purely in quantitative terms. Foreign trade manifests a wide variety, both in the objects that enter into it and in the circumstances under which it is conducted. In either respect it undergoes marked changes from generation to generation—changes that a purely quantitative study does not reveal. And even a very superficial examination of international relations indicates that it is the character rather than the quantity of trade that bears upon the question of war or peace. England and Germany compete in the export of textiles to the United States; the trade is an important one, yet it is never enumerated among the causes of the alleged hostility existing between the two nations. Both countries are competitors in the purchase of American cotton, but this competition excites no international animosity whatever. For a number of years Canadian competition in the supplying of wheat to the British market has threatened to confine our own wheat growers to the national market; but it would be difficult to find anywhere in the United States a trace of jealousy of Canadian agricultural development. For the United States, as for many other countries, England is by far the greatest market for exports and imports as well. Yet it has never occurred to our enemies to devise plans for excluding us from the British market, nor has it occurred to us that we might ever have to fight for it.

The markets of North China, on the other hand, are relatively unimportant if measured quantitatively. Yet there are nations that endeavor to exclude other nations from them; and such exclusion would be regarded as proper ground for serious diplomatic representations, if not for war. Central Africa is worth scarcely anything to the

[1] By Alvin Johnson. Adapted from "Commerce and War," *Political Science Quarterly*, XXIX, No. 1, March, 1914. Copyright by Ginn & Co.

Ed. Note.—Alvin Johnson is on the editorial staff of the *New Republic* and was formerly professor of economics at Cornell, Leland Stanford Junior, and other American universities.

white races except as a market. And as a market its power of supplying and absorbing products is low. Nevertheless great powers have recently been brought to the verge of war by the question of the control of this region.

As the foregoing contrast indicates, there is a kind of trade which involves no warlike element and another kind that is a natural cause of strife. In what does the difference fundamentally consist? Not in the kind of objects entering into trade, but in conditions arising in the field of values and determining the possibilities of profit.

Among nations in the same plane of civilization, already closely related through trade, there exists a fairly uniform scale of values. With due allowance for costs of transportation and customs duties, all movable goods command about the same price in the United States as in England, France, or Germany. The American wheat exporter can just afford to send wheat to the British market. The price he receives pays him for his labor and risk and gives him ordinarily a reasonable profit besides. It gives him no surplus on which to finance a campaign of exclusion against Canadian or Russian wheat exporters. The latter also are forced to content themselves with moderate rewards. There are no startling profits to excite international jealousies. Accordingly there is nothing in a trade of this character that could by any chance lead to international strife. Some ill-feeling may occasionally be produced by what appear to be unfair competitive methods, such as "dumping." But this is essentially a matter of industrial rather than commercial competition and hence falls outside of the range of the present inquiry.

The trade between regions differing widely in civilization, especially if it is a new trade, stands on another footing. Here the most striking fact is discrepancy in the scale of values. In Oregon, one hundred years ago, four leaves of tobacco could command a beaver skin. On the African Gold Coast, in the early eighteenth century, a lucky trader might occasionally exchange a handful of salt for a handful of gold dust. There was a time when the Japanese ratio of gold to silver was one to four, while that of the Occident was one to fifteen. From such instances, chosen, it is significant to note, from the more or less remote past, it is easy to reconstruct for ourselves the conditions under which the foreign trader worked. A fortune was easily to be had through the exploitation of existing differences in value scales. In the nature of the case, however, profits of such character could not be permanent.

Monopoly was a normal characteristic of trade between regions with widely varying scales of value. The East India companies of Portugal, Holland, and England could not tolerate "interlopers"—their own nationals not authorized to trade under the laws of the companies. No more welcome were the interlopers in the American fur trade or in the African slave trade. And if a chartered company could not tolerate the competition of its nationals, what must have been its attitude toward the citizens of other nations that attempted to trade in the territory which it had marked out for itself? History affords us an abundance of information bearing upon this question. Always the foreign trader was regarded with detestation. To mislead him by false information, to place him in the hands of corrupt guides who would conduct him out of the track of profitable trade or even into positive dangers were among the mildest measures employed. If the foreigner manifested the determination to force himself into the forbidden trade, distrust and ill-will ripened into implacable hostility. The history of trade with so-called barbarous races is red with "factories" burned and massacres perpetrated. The nations to which the traders owed allegiance might be at peace; but between the traders themselves there could be no lasting peace. There is scarcely anything in history more barbarous than those wars of trading-posts on the coast of India or Africa or in the forests of America. It was a warfare without rules, having for its object not subjugation but utter extermination.

It was inevitable that the bitterness arising from such conflicts should extend, in ever-widening circles, until they colored the whole national consciousness. Spanish cruelty, French chicanery, British perfidy, and the cold greed of the Dutch were popular concepts originating in the contest for trade on the fringe of occidental civilization, or, in economic terms, on the fringe of the occidental value system. And these concepts, if they did not lead directly to international war, none the less afforded a basis for the warlike fervor upon which the statesman relied in his schemes of national aggrandizement.

For upward of a thousand years trade has been carried on between the commercialized Occident and regions under different scales of values. And in all this period the trader has provided causes of war or contributed substantially to any other causes that might arise. In this millennium, however, the occidental value system has gradually extended its borders. At the beginning of the period it included only the central European part of the Mediterranean basin. Trade with

Syria, Africa, and North Europe was worth fighting for. At the close of the epoch of discovery most of Europe was under one value system; nations could afford to fight only for the trade of other continents. At the opening of the nineteenth century the cream of the exploitative trade of America and the East Indies had been skimmed; yet much remained worth monopolizing even there, and Eastern Asia and the greater part of Africa were virgin soil. At present, what remains? Parts of China and Central Asia, the heart of Africa, a few remote districts like the headwaters of the Amazon, and the territory around Hudson Bay. For the rest the world is under a uniform scale of values. Exploitative trade, which for ten centuries incited the nations to war, has practically completed its mission.

Although the era of exploitative trade is almost at an end, it would be rash to assume that its political influence has vanished. Political systems are constantly adapting themselves to economic conditions, but always lag behind. In this sense politics is past economics. Especially is this true of international policies, where tradition necessarily plays an exceedingly important part. Domestic policies may change with the rise to power of a new political party; but a nation's foreign policy is expected to remain consistent. Whatever party controls our government, we may be sure that it will cherish the Monroe Doctrine with traditional zeal. The British government, whether conservative, liberal, or radical, must fix a watchful eye upon the trade routes to India. Russia, whether an absolute monarchy or a constitutional government, must keep alive its traditional yearning for Constantinople and British India. These and similar policies are in large measure the outgrowth of the exploitative trade that is now vanishing from the earth. The trading advantages to be derived from the occupation of India are no longer worth fighting for. With India under British rule the Russian trader finds no obstacles placed in his path; and if India were under Russian rule, its trade with England would not be seriously affected. One hundred years ago India was a rich prize, commercially; it is now merely a region in which men may buy and sell at moderate profits. Russia and Great Britain may yet fight over India, but if they do it will be chiefly on account of memories of economic relations now obsolete.

The trade between regions of the same order of civilization has itself undergone noteworthy changes in character. In early modern times the commodities entering most generally into international trade were luxuries. With the improvement of ocean and land

carriage a vast commerce in staples grew up. Along with the commerce in staples has arisen what in default of a better name we may call a specialty trade, of which the automobile and the typewriter may be given as representative objects. The trade in specialties is of course still greatly inferior to the staple trade, but it is steadily increasing in relative importance.

More than any other branch of commerce the specialty trades stand in need of stable and harmonious international relations. We cannot establish a foreign market for our automobiles or farm machinery without a considerable expense in building up a marketing organization. A severe customs duty directed against us virtually destroys a capital invested. It is not so with a staple trade. The British may levy a duty upon our wheat and curtail our market in some measure. But we have no capital invested in a wheat-marketing organization that the duty could destroy. It follows then that, whereas exporters of staples may regard the commercial policy of foreign nations as something with which they need not be greatly concerned, specialty exporters are intimately interested in every change in commercial policy. Of all traders they are least able to survive a customs war or other serious disturbance of international business.

To summarize: One of the two great branches into which trade is divisible, typified by commerce with colonials, barbarians, and infidels, naturally breeds war. This branch of trade has very nearly disappeared through the extension of the occidental value system to the ends of the world. Of the other great branch, one form, the trade in luxuries, once predominant but now relatively insignificant, has served in its time to produce international discord. The great staple trade of modern times has had nothing to gain from international animosities, and the growing specialty trade has everything to lose from them. We are therefore justified in asserting that war and commerce, united through a thousand years, are now in fact divorced, except perhaps in the eyes of the international politician, who still premises his action upon their ancient relation.

2. CONCESSIONARY INVESTORS: A POWERFUL SPECIAL INTEREST[1]

No one will dispute the fact that certain individuals in positions of power worked actively to bring on the present crisis, nor that acts

[1] By Alvin Johnson (see p. 43). Adapted from "The War: By an Economist," *Unpopular Review*, II (July–December, 1914), 411–29. Copyright by Henry Holt & Co., 1914.

were committed that deserve the execration of mankind. It will not be denied that ancient political and cultural antagonisms essentially conditioned the present war; but for such antagonisms the peace would have remained unbroken. Still these forces are, in a sense, static and hence not adequate to explain change. The Russian is not more aggressive, the German not more arrogant, nor the Englishman more intent upon naval dominance than they were twenty years ago. Pride of race and intolerance of religion have been with us always, and there is no evidence of their recent intensification. What chiefly needs explanation is that for a generation the consciousness of Europe has been filling up with fighting concepts. The fact has been noted by all serious students of European international relations. It is forcibly demonstrated by the enthusiasm with which the several nations, each with a reason of its own, have entered the present conflict. Desperate efforts have been making, for years, to prepare for the struggle that was regarded as inevitable. Accordingly we can impute to the acts of particular persons little more than the choice of time and occasion for the outbreak of hostilities. The time may have been inauspicious; the occasion may have been one that will not look well in history. For the underlying forces working cumulatively toward an issue we must, however, look elsewhere than to personal volition.

The greed of the armament industries and the incessant playing upon popular opinion by their subsidized organs have often been assigned to a chief rôle in the drama of international discord. Competitive military preparations, drawing to themselves an increasing share of the intellectual energies of a nation, have long been regarded as a menace to the peace of the world. Every organ seeks to exercise a function. The Crown Prince of Germany, in his panegyric of militarism, expresses poignant regret that all the splendid military forces of the Empire should be expended futilely in peaceful show. Professional warriors want war and will work to bring it about. The future historian will doubtless give weight to the above-mentioned forces as well as to many others that cannot here be touched upon. But he will assign vastly more importance than we of today to the national antipathies engendered by the scramble for colonial possessions and to the motives giving rise to it. It may be worth our while, even now, to fix our attention upon this aspect of the question.

What did Germany want with the "Land of the Morning"? What does the Eastern Mediterranean mean to Russia? And what would it signify to England if either dream were realized? Is it a matter of sentiment, of "historic mission," or is it a matter of practical

interest? And if a matter of practical interest, whose interest weighs so heavily that it must be bought with cities in ruins and provinces devastated, with hundreds of thousands of the best and most useful lives sent down to dusty death? Manifestly, not the interest of the mass of humanity.

The *Morgenland*, be it understood, is only one of the rotten stones in the arch of civilization. Mexico is another. India, China, Africa are of similar character. But the *Morgenland* may serve as a type for our study, and we may profitably confine our analysis to the German yearnings for the *Morgenland*, not because they are in any way unique, but because they are typical.

The colonial trader was once the chief cause of wars, and he still contributes his quota to international misunderstanding and hostility. But there is another interest that has grown to far greater importance in the colonial domain. This we may describe as the concessionary interest. Vast fortunes have been accumulated, in the semibarbarous belt, by the exploitation of natural resources and works of public utility. The "Land of the Morning" would be exceptionally rich in concessions to the nationals of any imperial state. There are oil fields and mines to open, railways and irrigation works to construct. Some of these opportunities are already in German possession; their security, however, depends upon continued exercise, by Germany, of influence upon the Ottoman government. That government is notoriously shifty, and the interests involved will never be wholly safe until the Levant is a German colony. The concessionary interest, like the colonial trading interest, offers chances of sudden wealth. The former, however, is far more vulnerable than the latter. The fixed investment of the concessionary is far greater than that of the trader. Hence, while the colonial trading interest thrives best with the support of the home government, to the concessionary interest such support is indispensable. Politics is a necessary part of the concessionary business.

How far is the concessionary interest identical with the national interest? Let us consider what difference it makes to you and me whether the Pearson interests or the Waters-Pierce interests control the oil fields of Mexico. If the Pearson interests, several great fortunes will be constituted in England; if the Waters-Pierce, similar fortunes will be constituted here. In either case the money will lie at an infinite distance from you and me. Still we are patriots and would rather have it here than in England. Patriotism aside, the great fortune here will pay income tax to our own treasury. Its

spending will afford many golden crumbs to fellow-citizens of ours. The exploitation of the oil fields will require much machinery, for which, under Waters-Pierce control, the first bid would be offered to our own industry. Many young men of our nationality would find employment as engineers, foremen, superintendents. Undoubtedly it is better for the national interest to have the concession in national hands. But what is the magnitude of the concessionary interest and how many votes should it have on questions of peace and war? Of the whole capital of Great Britain not one-fifth consists in foreign investments, and of that fifth scarcely a quarter can be concessionary. One-tenth of Germany's capital is invested abroad, and probably not a fifth of that is concessionary. Of our own capital one part in a hundred is in foreign investments, of which one-half is in Mexico. Not nearly all of that half is concessionary. It did not prove to be enough to go to war over.

Capital, it is often said, is cosmopolitan; capital knows no such thing as patriotism. This may be true of the cautious, colorless capital of ordinary finance and industry. It is not true of the capital upon which speculative enterprise is based. It was an intense patriotism that was avowed by Jay Gould and Harriman; intense is the patriotism of J. J. Hill, the duPonts, and the Guggenheims. Even Mellen is, or was, patriotic in his feelings toward New England. But most intense of all is the patriotism of the capitalist whose interests lie in the twilight zone of the barbaric belt. Purer expressions of devotion to America, of deep concern for her future, than those issuing from the lips of American concessionaries in Mexico you never hear. We were all moved by the grandiose African dream of Cecil Rhodes. "All red"—i.e., British—a British heart within every black skin from the Cape to Cairo. The case is typical of the capitalist speculator abroad. He is a patriot through thick and thin, not a white-blooded "cit" like you and me, who before volunteering support for our country's acts would presume to pass judgment upon them. He is a patriot who would knock a chip off the shoulder of the meanest upstart of a barbarian dictator without regard to the cost of doing it; not a calculator like you and me.

By interest the concessionary capitalist is a patriot. He needs his country in his business. But this is by no means the whole explanation of his patriotism. His type is reckless and therefore generous and idealistic. He must love and admire great things, and what thing is greater than the imperial dominion of his country? One must have a mean opinion of human nature to suspect the purity

of the motives of Cecil Rhodes. Doubtless Rhodes began with selfish motives, but his private interests were soon submerged in his imperial ambitions. We may not be justified in assuming that selfish interest operates to the utter exclusion of all patriotic motives. Patriotism has always burned more brightly in border provinces than in the heart of the national territory. It is natural then that patriotism should be still more intense in those extensions of the national domain represented by permanent interests abroad.

In an ideal scheme of things love of one's own country would not involve hatred and contempt for other countries. But patriotism compounded with financial interest does usually produce detestation for the corresponding alien compound. We who meet the Germans in America, in England, in Germany, engaged in the common labor of advancing man's control over nature, respect them and, if we see much of them, love them. Our capitalist speculators in South America and in the Orient, meeting their similars of German nationality, hate them heartily. Those speculators are the nerve ends of modern industrial nationalism, and they are specialized to the work of conveying sensations of hate. For the present we have few nerves of the kind, and all they have succeeded in conveying to us is a vague feeling of uneasiness over the German advance in the colonial field. Far more powerful must have been the reaction upon nations like England and France that are serious competitors in the same field. And German capitalist speculators, thwarted in their designs by the English and the French, have contributed to the popular feeling that Germany must fight for what she gets.

The capitalistic speculator, even when operating at home where his action may be directed against us, enjoys a power over the popular imagination and a political influence quite incommensurate with the extent of his interests. When the seat of his operations is a foreign territory whence flow back reports of his great achievements—achievements that cost us nothing and bring home fortunes to be taxed and spent among us—his social and political influence attains even more exaggerated proportions. And this is the more significant in view of the fact that his relations with government—now even a more important part of his business—are concentrated upon that most sensitive of governmental organs, the foreign office.

When diplomatic questions concerning the non-industrial belt arise, and most modern diplomatic questions concern this belt, the voice of the concessionaries is heard in the councils of state. This voice is the more convincing because of the patriotism that colors

its expression of interest. What is perhaps more important, the ordinary conduct of exploitative business in an undeveloped state keeps the concessionary in constant relation with the consular and diplomatic officers established there. In a sense such officers are the concessionary's agents, yet their communications to the home office are the material out of which diplomatic situations are created. It is accordingly idle to suppose that exploitative capital in foreign investments weighs in foreign policy only as an equal capital at home.

It is the interest of exploitative capital that makes the "Morning Land," Mexico, China, and Africa rotten stones in the arch of civilization. But for exploitative capital those regions might remain backward, socially and politically: this would not greatly concern any industrial nation except in so far as it responded to a missionary impulse. The backward states afford, however, possibilities of sudden wealth; and since this is the case, they must attract exploiters, who must seek and obtain the backing of their home governments, with resultant international rivalry, hostility, war.

If we could confidently predict the industrialization of the backward countries, we should be able to foresee an end of this one most fruitful of all sources of international strife. But China will not be industrialized for a generation at least; and many generations must elapse before the tropics are concessionproof. Accordingly the one hope for universal peace would appear to lie in the possibility of divorcing, in the popular consciousness, the concessionary interest from the national interest.

The concession and the closed trade are the fault lines in the crust of civilization. Solve the problems of the concession and the closed trade and the earth-hunger will have lost its strongest stimulus, and peace, when restored, may abide throughout the world.

3. TARIFF WALLS AND INTERNATIONAL FRICTION[1]

From the dawn of history uncontrolled commercialism has been one of the principal causes of misgovernment, and more especially of

[1] By the Earl of Cromer. Adapted from "Free Trade in Its Relation to Peace and War," *Nineteenth Century*, LXVIII (July–December, 1910), 386–88. Copyright by Leonard Scott Publication Co.

Evelyn Baring, first Earl of Cromer (1841—), was British agent and consul-general in Egypt, 1883–1907. He has had a distinguished career in the army and in the government of India and Egypt and has written numerous books—military, political, and literary. This paper was read before the International Free Trade Congress, held at Antwerp in August, 1910.

the misgovernment of subject races. The early history of the Spaniards in South and Central America, as well as the more recent history of other states, testifies to the truth of this generalization. Similarly trade—that is to say, exclusive trade—far from tending to promote peace, has not infrequently been accompanied by aggression and has rather tended to promote war. Tariff wars, which are the natural outcome of the protective system, have been of frequent occurrence, and, although I am not at all prepared to admit that under no circumstances is a policy of retaliation justifiable, it is certain that that policy, carried to excess, has at times endangered European peace. There is ample proof that the tariff war between Russia and Germany in 1893 "was regarded by both responsible parties as likely to lead to a state of things dangerous to the peace of Europe." Professor Dietzel in his very remarkable and exhaustive work on *Retaliatory Duties* shows very clearly that the example of tariff wars is highly contagious. Speaking of events which occurred in 1902 and subsequent years he says that Germany set the bad example. Russia, Austria-Hungary, Roumania, Switzerland, Portugal, Holland, Servia, followed suit. An international arming epidemic broke out. Everywhere indeed it was said: "We are not at all desirous of a tariff war. We are acting only on the maxim so often proclaimed among us, *Si vis pacem, para bellum.*"

Can it be doubted that there is a distinct connection between these tariff wars and the huge armaments which are now maintained by every European state? The connection is, in fact, very close. Tariff wars engender the belief that wars carried on by shot and shell may not improbably follow. They thus encourage and even necessitate the costly preparations for war which weigh so heavily, not only on the industries, but also on the moral and intellectual progress of the world.

To sum up all I have to say on this subject, I do not for a moment suppose that universal free trade—even if the adoption of such a policy were conceivable—would inaugurate an era of universal and permanent peace. Whatever fiscal policy be adopted by the great commercial nations of the world, it is wholly illusory to suppose that the risk of war can be altogether avoided in the future any more than has been the case in the past. But I am equally certain that, whereas exclusive trade tends to exacerbate international relations, free trade, by mutually enlisting a number of influential material interests in the cause of peace, tends to ameliorate those relations, and thus, *pro*

tanto, to diminish the probability of war. No nation has, of course, the least right to dictate the fiscal policy of its neighbors; neither has it any legitimate cause to complain when its neighbors exercise their unquestionable right to make whatever fiscal arrangements they consider conducive to their own interests. But the real and ostensible causes of war are not always identical. When once irritation begins to rankle and rival interests clash to an excessive degree, the guns are apt to go off by themselves, and an adroit diplomacy may confidently be trusted to discover some plausible pretext for their explosion.

Some twelve years ago the British flag was hoisted in the Soudan side by side with the Egyptian. Europe tacitly acquiesced. Why did it do so? It was because a clause was introduced into the Anglo-Egyptian Convention of 1899 under which no trade preference was to be accorded to any nation. All were placed on a footing of perfect equality. Indeed the whole fiscal policy adopted in Egypt since the British occupation in 1883 has been based on distinctly free-trade principles. Indirect taxes have been in some instances reduced. Those that remain in force are imposed, not for protective, but for revenue, purposes, whilst in one important instance—that of cotton goods—an excise duty has been imposed in order to avoid the risk of the customs duties acting protectively.

Free trade mitigates, though it is powerless to remove, international animosities. Exclusive trade stimulates and aggravates those animosities. I do not by any means maintain that this argument is by itself conclusive against the adoption of a policy of protection, if on other grounds the adoption of such a policy is deemed desirable; but it is one aspect of the question which, when the whole issue is under consideration, should not be left out of account.

4. THE "OPEN DOOR" DOES NOT SETTLE EVERYTHING[1]

The whole situation might be summed up by saying that the commercial development of the world will not wait until each territory has created for itself a stable and fairly modern political system. By some means or other the weak states have to be brought within the

[1] By Walter Lippmann. Adapted from *The Stakes of Diplomacy*, pp. 98–125. Copyright by Henry Holt & Co., 1915. Cf. the final paragraph from Bernhardi, pp. 25–26 above.

Ed. Note.—Walter Lippmann (1889—) is a prominent young American writer on political subjects. He has been one of the editors of the *New Republic* and is now serving the government in a confidential capacity.

framework of commercial administration. Their independence and integrity, so called, are dependent upon their creating conditions under which world-wide business can be conducted. The pressure to organize the globe is enormous.

The formula of modern imperialism seems to be that financial groups enter a weak state and create "national interests," which then evoke national feeling. The corruption and inefficiency of the weak state "endanger" the interests; patriotism rises to defend them, and political control follows.

The diplomats have even had a programme for the peaceful organization of backward countries. Their formula has been "the preservation of their integrity and the open door to the commerce of all nations." Almost every recent diplomatic document dealing with Asia or Africa contains some such announcement. The doctrine is intended to allay suspicion, but it does more than that. In a half-hearted way it grasps at a solution of the world-problem. For if you can preserve the integrity of a country, and you can keep the door open, then you preclude any one nation from monopoly, you give all nations an interest in preventing aggression, and you remove the prime source of friction, which is the attempt of traders to secure control of the territory and discriminate against their competitors. The diplomats diagnosed the malady. They saw that the weakness of these countries invited aggressive competition, so they proclaimed territorial integrity. They saw that the chief interest of all nations was trade, so they proclaimed the open door. They saw that only one nation could gain by imperial control and special economic privilege, and they hoped that the interests of all the others would prevent the absorption of weaker states. The ideal they stood for was international. Taken at its face value, it meant that modern commerce was to penetrate, without destroying, the life of the natives and without pre-empting the territory for the business men of any one nationality.

The only trouble with the ideal was that it could not be taken at its face value. Integrity and the open door have almost never been realized, and the phrases of treaties have frequently remained an empty aspiration. Americans ought to have no difficulty in understanding this result. We too have an ideal of the open door to all comers, and we know how hard it has been to make our government live up to that ideal. We know how railroads have discriminated in their rates, how officials have given special privileges to special interests.

We have fought a long fight against it. Well, the same kinds of forces which have so often shut the open door in the United States are at work in these weak countries where governments extend their imperial control. Groups of business men tend to secure political power in the vassal territory, and after that integrity and the open door are likely to be a good deal of a mockery.

A rough formula of what happens may be drawn up. A government for one reason or another acquires dominion over a backward people. Nowadays it almost always does so with the consent of the other Powers. The act is proclaimed to be a European stewardship, a disinterested piece of international policing; all nations are promised equal rights, the "protected" people are promised a benevolent guardian. This work is done, not by angels, but by colonial officials. These human, all-too-human, beings become associated with contractors, concessionaires, bankers, traders. The officials have big favors to give—franchises, mining rights, docking privileges, land laws, taxation, customs administration, public works. The colonial officials must give them to somebody, and they have to translate the phrase "open door" into these concrete matters. If they are French officials knowing French business men, what is more natural than that these decisions should go against the German competitors? With the best intentions in the world it would be hard to maintain equal rights. And their intentions are not always the best in the world.

Let me make myself clear: I do not think Europe is fighting about any particular privilege in the Balkans or in Africa. I think she is fighting because Europe had been divided into two groups which clashed again and again over the organization of the backward parts of the world. Those clashes involved prestige, called forth national suspicions, created the armaments, and after a while no question could be settled on its merits. Each question involved the standing of the Powers, each question was a test of relative strength. Since no question could be settled, every question continued to pour its poison into the European mind and made European diplomacy incapable of preserving the peace.

II

WAR AS A BUSINESS VENTURE

Introduction

Does successful war pay? In the first place, as Norman Angell (selection VI, 1) is careful to point out, and as Brailsford (Selection VII, 3) further emphasizes, it does not require gains for the people as a whole to explain war. It is enough if influential classes have a mistaken hope of gains. Moreover, a defensive war is not expected to show a profit in measurable terms, and it is a curious fact that modern wars appear to both sides as defensive conflicts. A nation that cannot protect itself against small encroachments may suffer large ones, and this includes encroachments on national prestige—that infinitely elastic national asset. From the point of view of sheer rivalry in prestige, a loss to the conquered may be felt as in itself a gain to the conqueror regardless of whether it leaves them both better or worse off than before, in absolute terms. The proposals and measures, mentioned below, that look toward crippling foreign competition, are probably of this sort. But there is a dilemma here. The conqueror has his choice between ruining the industries that compete with his own and making them productive in order to exploit them for his own gain, but, as Mr. Brailsford indicates, he cannot do both.

The case for the unprofitableness of conquest (see selections from Norman Angell) rests on the fact that the field for exploitation is being more and more limited: first, by international law (see extracts from the Hague Convention), and second, by the very complexity and mutuality of the economic system of today. Plundering which wrecks the efficiency of the conquered territory would soon recoil on the plunderers, for they could not gain by trade with bankrupts nor sell to those who have no goods to pay with. Plundering which would not wreck the efficiency of the conquered territory means nothing less than the reorganization of the economic system of a nation under new ownership and control and in the face of the unwillingness of the people to lend themselves to such a program. Only the Germans would conceive such an undertaking, and it is doubtful if even they could carry it through successfully.

Their projects, however, reveal a readiness to undertake a more sweeping transfer of ownership and reorganization of work in conquered areas than Norman Angell takes into consideration in his view of the case. Germany has dug her trenches, harvested her crops, and woven her uniforms with the labor of occupied territories, has fed her soldiers with their wheat and her guns with their iron. This increases Germany's fighting power enormously, but not necessarily her financial profits, unless she withholds fair compensation from private owners. To work these resources permanently to the financial profit of German citizens is another matter, and it remains to be seen how far this can be accomplished.

V. The Negative Side

1. CONQUEST DOES NOT PAY[1]

The series of Bourse crises on the Berlin Stock Exchange by which German bankers, merchants, and manufacturers suffered heavily as a direct result of an act of political aggression on the part of the German government is a fact which illustrates and confirms in a sufficiently striking fashion the thesis which I have attempted to outline in "The Great Illusion."

What, in two words, is this thesis? It is this: that it has in the modern world become impossible, by successful war between civilized nations, to derive any profit whatsoever. This involves of course a complete repudiation of the axioms which have heretofore dominated and still to a large extent dominate European statecraft. The naval rivalry between Great Britain and Germany is part of that struggle for commercial and industrial predominance which is going on between two countries, and moreover the Mahans, von Stengels, Homer Leas, and Roosevelts defend these "axioms" by what is presumed to be a very profound philosophy. It is all, we are told, in keeping with the great laws of life in the world—with all that we know of the evolutionary process: throughout nature the law of fight and struggle is supreme; so must it be with nations.

Well, it's all wrong. It considers only one half of the facts, and the other half, perhaps the larger, certainly the dominating half in the general process of human development, is left out. And the

[1] By Norman Angell (see p. 9). Adapted from "Recent International Events and The Great Illusion," *World's Work*, XXIII (1911–12), 149–54. Cf. also p. 42, above.

evolutionary analogy at which I have hinted and which is accepted almost universally as a true analogy, is an absolutely false one, and there again the dominating factor, as we shall see presently, has not been considered.

The illusion is a double one. Struggle is only one half of the law of life. The other half, without which life would be impossible, is known as the law of mutual aid, co-operation. This process, which throughout all the higher forms of life runs parallel with the law of struggle, is seen even in the earliest organism. Its simplest form is the co-operation of male and female. If struggle in its completest form prevented that co-operation, life would never have developed beyond the first organism that possessed a sex; and it will be found that in the process of development every added factor of co-operation diminishes the proportional importance of the factor of conflict. For this reason in the domain of sociology the relative rôles of these two factors are constantly changing. Let us illustrate as concretely as possible.

When Olaf, the viking king, descended on the coast of Northumbria he hammered his way into a Saxon stronghold, seized all the gold, and silver, and hides, and corn, and cattle, and women, and slaves that he could lay hand on, sailed back home, and was the richer by just the amount of loot he could safely land on his own shores. As against the profit of such an expedition he had to set on the debit side of the account practically nothing at all.

But imagine a modern Olaf landed in London at the head of a victorious army making straight for the cellars of the Bank of England and looting them in the fashion in which one distressed correspondent of a London paper foresees—would the position be the same? The position would be absolutely different; for the day that he looted the Bank of England, the Bank of Germany would suspend payment and his own balance therein disappear. For every sovereign that he took from English merchants in this way, German merchants would probably pay a hundred. Every time that he brought an English bank or insurance company or commercial house to ruin he would know with absolute and mathematical certainty that he would by the same blow bring a German bank, a German insurance company, and a German house to ruin also. Can we pretend, therefore, that conditions have not altered? Of course they have altered. The factor of co-operation which our credit system every day and every hour is intensifying has modified profoundly the weight of the factor of

conflict; to such a degree indeed that confiscation, in the rude form in which the nervous correspondent I have cited suggests, has become a practical impossibility. The series of recent financial crises in Berlin have given this abundant illustration. What happened? The German government took an action which threatened the peace of Europe and which was aimed specifically at France. The first tangible result of such an action was that German industrial securities lost value to the extent of some scores of millions, and the whole incident has cost German commerce and industry a great deal more than it has cost any of the other nations, although they too have, of course, suffered badly. It will not take many more "black Saturdays" to show even the German public that to disorganize the trade of some hundreds of millions for the purpose of securing dubious exclusive advantages in a territory which at present provides a market of something less than half a million is not to throw away a sprat in order to catch a whale, but to throw away a whale in order to catch a sprat—and then not catch it!

The old notion that, as between nations or large communities, A can use military force to obtain from B advantages which he could not obtain otherwise; that military force can be used in a modern world as a means of predatory exploitation; that by means of military force a people can live as parasites by the exaction of tribute in some form from other peoples, is at last being recognized as not justified by the facts of the case. The commercial and financial operations of the modern world are essentially mutual. If a nation is to find a market, that market must be a trading and producing people, which means that the market must be a competitor in some sense. If a nation is to have sound credit, it must not disturb the credit of other nations. If it is to exact its own half of the economic contract, it must fulfil its own half. If it is to have a field for its investments, it must not place the territories in which it hopes to find that investment at any financial or economic disadvantage.

These propositions are not new. They have always represented the ideal conditions of human society. But they were never practically operative while distance and difficulties of communication and ideas shut off one people from another. But the conditions to-day differ from the conditions even as we knew them thirty years ago by this fact, that the telegraph has made us financially one, and that what was originally merely a moral fact—that we are all members one of another—has become a very patent and intrusive financial fact,

demonstrated to the densest of us by the simple figures of the bank rate.

Never was it so possible to present this truth in the simple and dramatic form as now, when every time that a loan is contracted, every time that a German industrial concern sells its debentures in London or establishes a factory in South America, there is an intensification of it. My claim is not that these facts are new so much as that they have reached a condition of weight in the practical daily affairs of our life which can no longer be ignored in our practical politics, as the recent Berlin crisis so abundantly shows. When they are realized, a diplomatic revolution to the advantage of all becomes inevitable.

The need for expressing a thing in headlines has, of course, distorted the principles which I have attempted to elaborate: "'War Now Impossible,' says the author of 'The Great Illusion'" is the sort of headline that is turning my hair gray. I have never said, of course, that war is impossible. On the contrary, given the prevailing condition of ignorance concerning the elementary economic facts of the world, war is even likely.

But, it will be asked, why, if victory can be of no possible advantage, do we stand in danger of war, since in every war someone must be the aggressor, and aggression will be committed only in the hope of obtaining advantage thereby? For this reason: not necessarily his real interest, but what, with all the distortion of short sight and temper, he deems his interest is where we must look for the motives of a man's conduct. The futility of war will not stop war until general opinion has recognized the futility. And European statecraft, still mumbling the obsolete formulae that have come down to us from conditions that long since ceased to exist, seems still to be in sublime ignorance of even the very simple facts which make the conclusion just indicated inevitable. So long as European public opinion as a whole is thus ignorant, war is quite possible. Europe may make the enormous, the all but incalculable, sacrifices she would certainly have to make in order—not for the first time, be it said—to fight for an illusion.

2. PERMANENT SUBJUGATION IMPOSSIBLE[1]

The sheer military subservience of a strong people can be only temporary, because (*a*) of the recuperative capacity shown by such

[1] By Norman Angell. Adapted from *America and the New World-State*, pp. 268–72. Published by G. P. Putnam's Sons, 1915.

conquered states in the past, and (*b*) of the extreme mutability of alliances—it being a possibly temporary alliance which gives the preponderance of power against them.

The merely temporary effect upon a virile people of the destruction of their armies and political machinery, the artificial and unreal character of the apparent "wiping off the map" that follows, has been dramatically demonstrated in the case of Germany within the memory of the fathers of men still living. In the first few years of the nineteenth century Prussia was annihilated as a military force. The army was destroyed at Jena and Auerstadt, and the whole country was overrun by the French. By the Peace of Tilsit, Prussia was deprived of all territory west of the Elbe and all her Polish provinces, of the southern part of West Prussia, of Dantzig, thus losing nearly half her population and area: the French army remained in occupation until heavy contributions demanded by France were paid and by the subsequent treaty the Prussian army was limited to not more than 42,000 men, and she was forbidden to create a militia. She was broken, apparently, so completely that even some five years later she was compelled to furnish, at Napoleon's command, a contingent for the invasion of Russia. The German states were weakened and divided by all the statecraft that Napoleon could employ. He played upon their mutual jealousies, brought some of them into alliance with himself, created a buffer state of Westphalia, Frenchified many of the German courts, endowed them with the code Napoleon. Germany seemed so shattered that she was not even a "geographical expression." It seemed, indeed, as though the very soul of the people had been crushed, and that the moral resistance to the invader had been stamped out, for, as one writer has said, it was the peculiar feature of the Germany which Napoleon overran that her greatest men were either indifferent, like Goethe, or else gave a certain welcome to the ideas which the French invaders represented. Yet with this unpromising material the workmen of the German national renaissance laboured to such good purpose that within a little more than five years of the humiliation of the Peace of Tilsit, the last French army in Germany had been destroyed and Prussia was able finally to take the major part in the destruction of the Napoleonic, and in the restoration of the German, Empire. It was from the crushing of Prussia after Jena that dates the revival of German national consciousness and the desire for German unity.

Now take the case of France in 1870. The German armies, drawn from states which within the memory of men then living had been mere appanages of Napoleon, which as a matter of fact had furnished some of the soldiers of his armies, had crushed the armies of Louis Napoleon. Not merely was France prostrated, her territory in the occupation of German soldiers, the French Empire overthrown and replaced by an unstable republic, but frightful civil conflicts like the Commune had divided France against herself. So distraught, indeed, was she that Bismarck had almost to create a French government with which to treat at all. What was at the time an immense indemnity had been imposed upon her, and it was generally believed that not for generations could she become a considerable military or political factor in Europe again. Her increase of population was feeble tending to stagnation; her political institutions were unstable; she was torn by internal dissensions; and yet, as we know, within five years of the conclusion of peace France had already sufficiently recuperated to become a cause of anxiety to Bismarck, who believed that the work of "destruction" would have to be begun all over again. And if one goes back to earlier centuries, to the France of Louis XIV and her recovery after her defeat in the War of the Austrian Succession, to the incredible exhaustion of Prussia in wars like the Thirty Years' War, when her population was cut in half, or the Seven Years' War, it is the same story; a virile people cannot be "wiped from the map."

3. A GERMAN SOCIALIST VIEW[1]

ANNEXATIONS AND FOREIGN TRADE

In the struggle for the restoration of peace and of world-economics the propaganda for a "Peace without Annexation" encounters one main objection. A state, it is argued, cannot live unless it possesses the territories necessary for its supply of raw material. This argument is used by the annexationists of Germany, whose lust of conquest extends to the iron-ore fields of French Lorraine and the coal fields of Russian Poland. Such an argument rests in the last resort upon the idea of "autarchy" or self-sufficiency—the idea that state frontier must be drawn so that the economic areas within them can meet their

[1] Adapted from an article which the *New Europe* (III [1917], 408) publishes — with all the necessary reservations — as an important Socialist contribution to international commerce. The article first appeared in the *Arbeiter-Zeitung*, June 19, 1917.

own demand for raw material and be independent of other countries. As we cannot now exist without the products of southern climes, an ideal state of this kind would to-day have to extend from the Pole to the Equator. Autarchy is unrealisable unless the whole world is to be measured out anew. It is obviously an advantage to any state to possess as much raw material as possible, but every economic area, however richly endowed by nature, still requires to import from abroad. It is therefore a question whether the annexation of a few more sources of supply could ever make up for the permanent enmity of all neighbours which this would evoke.

We would prefer a situation in which neighboring peoples could use their national mineral wealth for mutual exchange and the extension of culture. Hue draws the conclusion that when we see in all belligerent countries the group of private capitalists who exploit the national mineral resources demanding a "peace imposed by force of arms," we must recognize that the most effective means of finally ending such intrigues is the general nationalisation of mines and of the armament industries which depend so closely upon them. But in reality the nations need nothing save the establishment of complete freedom of intercourse between all economic territories in the world.

4. TRADE WILL FLOW BACK TO ITS NATURAL CHANNELS[1]

Before the war Germany was producing about 28,000,000 tons of iron ore a year. Of this, about 21,000,000 tons came from Lorraine. Germany also imported ore from her immediate neighbors and lately from Sweden as well.

Suppose she loses Lorraine at the end of the war. She will lose about three-fourths of her annual production of iron ore. How will the deficiency be supplied? Partly by a better use of the remaining resources in the Rhineland and elsewhere, but largely, very largely, by increased imports. Assume for the moment that Germany becomes unable to buy iron from a restored French Lorraine; the ore or metal will most likely have to come from Sweden, perhaps even from South America. Thus we should have Germany buying ore and iron, at competitive prices, in markets which have hitherto helped to relieve the shortage in other countries. England would feel the

[1] By L. W. S. Adapted from "Lorraine, Coal and Iron," in *New Republic* (September 8, 1917), pp. 153–54.

pressure of these German orders, and so would Belgium. Even the United States might be affected by this forced reorganization of the world's iron market.

Suppose further that France, regaining Alsace-Lorraine at the end of the war, either cannot get or will not take coal from Germany. Before the war France was just able to make the best economic use of her iron ore. She was producing about 40,000,000 tons of coal a year in normal times. To this will be added not more than 3,500,000 a year from the mines of Lorraine. How will she manage to handle the additional 21,000,000 tons of Lorraine iron?

By getting coal from England? Until the war came England and Germany were both supplying coal to the furnaces of Northern France. England was supplying many places on the Continent, but not Lorraine, not Meurthe-et-Moselle, or Meuse.

How can this coal, which before the war did not compete successfully with German coal in Lorraine, Meurthe-et-Moselle, or Meuse, be brought to this region after the war at prices which will make the iron industry profitable? Only by lowering coal-transportation costs, or by devising a system of shipping Lorraine iron ore, at low cost, northward to meet English coal so near home that its price is still low. No doubt such a system of transporting coal and ore can finally be evolved and made to work satisfactorily. How long would this take? At least ten years. At present the economist, studying the problem of iron in Lorraine and the two departments, must deal first with conditions as they are, not as they may be in the future.

Suppose we nevertheless look into the future and assume that these difficulties have been overcome. There remains the fact that France would have to find a market for her iron outside her frontiers. What country could make use of the iron gained by smelting the 21,000,000 tons of ore thrown suddenly into the furnaces of France? Would England take this iron in exchange for her coal? Before the war the English iron industry was consuming every year about 23,000,000 tons of ore, of which nearly 16,000,000 tons were mined in England and approximately 7,000,000 were imported. Even if England were in future to take all her imported ore from France, France would still have on her hands a surplus of 14,000,000 tons, either to be smelted and used at home or exported.

Where could French iron ore go? To those countries which will lose part of their ore supplies when Germany outbuys them in their

former markets? It is doubtful whether this is a satisfactory answer, for the simple reason that Lorraine iron may be either unsuitable for the particular purposes of this demand, or else, as is more likely, too expensive because of transportation cost.

The only natural market where the Lorraine iron ore or the product of it can be disposed of cheaply and quickly will be Germany. In case she loses Lorraine, Germany also may soon realize the force of this truth and be willing to go to Lorraine for her iron ore. She may be willing to give in exchange the coal needed by France. A commercial arrangement providing for this exchange, giving Lorraine, Meurthe-et-Moselle, and Meuse a market for their iron ore and Germany a market for her coal must result from the transfer of Alsace-Lorraine from the German Empire to the French Republic. What other solution is possible, except the creation of an independent economic unit out of the two provinces?

5. LIMITS IMPOSED IN THE HAGUE CONVENTIONS

Article XLVI. Family honor and rights, the lives of persons, and private property, as well as religious convictions and practice, must be respected. Private property cannot be confiscated.

Article LII. Requisitions in kind and services shall not be demanded from municipalities or inhabitants except for the needs of the army of occupation. They shall be in proportion to the resources of the country, and of such a nature as not to involve the inhabitants in the obligation of taking part in military operations against their own country. Such requisitions and services shall only be demanded on the authority of the commander in the locality occupied. Contributions in kind shall as far as possible be paid for in cash; if not, a receipt shall be given, and the payment of the amount due shall be made as soon as possible.

Article LIII. An army of occupation can only take possession of cash, funds, and realizable securities which are strictly the property of the State, depots of arms, means of transport, stores and supplies, and, generally, all movable property belonging to the State which may be used for military operations. All appliances, whether on land, at sea, or in the air, adapted for the transmission of news or for the transport of persons or things, exclusive of cases governed by naval law, depots of arms, and, generally, all kinds of ammunition of war, may be seized, even if they belong to private individuals, but must be restored and compensation fixed when peace is made.

VI. The Profit Side

1. GERMANY READY TO ADMINISTER CAPTURED WEALTH[1]

I. THE ENEMY BEARS THE WHOLE BURDEN[2]

In the event of a peace favourable to Germany our enemies will have to pay:

a) The war expenditure, including federal and local expenditure, about	$30,000,000,000
b) The expenditure on pensions and armaments, viz., about $500,000,000 annually for about 40 years, representing a capital value of about	11,000,000,000
c) Losses in the colonies	1,250,000,000
d) Private losses	7,500,000,000
Grand total	$49,750,000,000

This is equivalent to a service of about $3,250,000,000 per annu n.

Such enormous sums, the author observes, cannot, of course, be paid cash down, nor would it be desirable if they could. Germany would have to obtain her indemnities by the exploitation of the conquered territory, principally by taking possession of all public and private property, which can be profitably administered by the state, as follows: A. Railways, canals, ports, warehouses, etc. B. Natural resources, such as coal, ore, salt, petroleum, etc. C. Land (forests), estates, and all land suitable for the settlement of German farmers.

On this basis Germany would be interested in the following:

a) Belgium: railways, coal mines, and deposits, other mines, state land, etc., total	$ 6,000,000,000
b) France: railways, coal mines, etc., iron fields in Lorraine (Briey and Longwy), total	5,000,000,000
c) Courland and Lithuania: railways (one-fifth), forest land and land fit for settlement (four-fifths), total	250,000,000

[1] By K. A. Fischer. Adapted from *Germany's Future as the Result of a Good or a Bad Peace.* This selection is from a pamphlet written by four Prussian officials and distributed by order of the War Office among the German troops. Printed in the *New Europe*, V, 87–89.

[2] The sums mentioned are stated in the original in round numbers (one or two digits) indicating rough estimates. In translating them into American money the editors have kept the figures round instead of translating accurately the sums given in the original.

d) Roumania: oil wells, which could be pledged to and administered by Germany, at least in part.....	1,250,000,000
e) Poland: (no "property suitable for state administration" is specified in the case of Poland, but as two lines are given to the heading, something appears to have been taken out of the text on second thoughts).....	1,500,000,000
Grand total.....	$14,000,000,000

To the above may be added:

f) Livonia and Esthonia: railways (one-third) forest land and land for settlements (two-thirds).....	$ 240,000,000

II. COLONIAL BOOTY

The property specified above thus accounts for only about $14,000,000,000 of the required $50,750,000,000, leaving $36,000,000,000, more to be covered. In view of the great demand for cargo space which may be expected after the war, the value of the part of the enemy merchant navies ceded to us may be estimated at about $1,000,000,000. If the Suez Canal, where shipping dues are high, is put under German administration, this will mean a further $240,000,000. Moreover, in the event of a favourable peace, the addition to Germany's African colonies of the Portuguese and Belgian colonial possessions, as well as of large sections of the British and French, and conceivably the Italian also, will be a necessity (*a*) from the military point of view, France having so far sent about 350,000–400,000 coloured troops from North and West Africa against us; (*b*) from the naval point of view, as Germany would then have new naval bases; (*c*) from the economic point of view, to safeguard our supply of raw materials. This extension of our African colonial empire may be estimated at about $2,400,000,000. The 33 billions still required must be paid for primarily by the import of raw material, half-products, and foodstuffs required by our national economy. In 1913 Germany imported $2,142,700,000 worth of these things, and in consequence of the great destruction of stocks our requirements after the war will be much greater and may well be put at $3,000,000,000–$3,800,000,000 for a number of years. Before the war England, France, and Russia, with their colonies, supplied us with about one-third of what we needed, and they will have to give us about a quarter in future also. The remainder of our imports must be procured from other countries and paid for with enemy money.

III. PLUNDER FOR GERMANY'S ALLIES

It must be borne in mind that the figures given above refer to the war expenditures of the German Empire only; the war expenditures and losses of our Allies amount to far more than $38,000,000,000, in addition, and will also have to be met by the enemy. Austria-Hungary will look principally to Italy and Serbia, and Bulgaria to Serbia and Roumania, for this purpose, while Turkey will insist in the first instance on the restoration of Egypt and Tripoli, which belong to her.

A peace by which we are made to bear our own burdens condemns us to an inevitable decline and to a permanent inferiority to America, Japan, England, and Russia. England will still continue in a position to exploit half the world in the shape of her colonies; she will make good all her losses from this inexhaustible source of supply; she will oust us from every market by every possible device; she will continue to rule the seas and live freely in them. Russia, again, whose strength is founded entirely on her dominion over vast areas and their increasing colonization by the peasantry, is in such a primitive stage of economic development that she cannot be shaken at all so long as she remains in possession of these areas; she will very rapidly develop her industry, her agriculture, and her means of communication, exploit her natural resources, and in a few decades herself grow and work up almost all classes of raw material, including cotton. At all this Germany will be compelled to look impotently on.

2. SYSTEMATIC EXPLOITATION: THE "RATHENAU PLAN"[1]

The German authorities have systematically exploited Belgium and the other lands conquered by them. This exploitation for the benefit of German industry has been going on from the very first days of the occupation in each of the conquered territories. It is an outgrowth from the "Rathenau Plan," which has made it possible for Germany to continue the war.

This plan, which was suggested early in August, 1914, by Dr. Walter Rathenau, president of the General Electric Company of Germany, was to establish a Bureau of Raw Materials for the War.

[1] Adapted from *German Treatment of Conquered Territory*. This was a pamphlet issued by the United States Committee on Public Information, March, 1918.

It was made a part of the Ministry of War, and one of its problems was as follows:

The occupation of Belgium, of the most valuable industrial parts of France, as well as of parts of Russia, made a new task for the organization. It was necessary to make use of the stocks of raw material of these three territories for the domestic economy of the war, to use, especially, the stores of wool found at the centers of the continental wool market. Valuable stocks of rubber and of saltpeter were to be used for the profit of the manufacturer at home. The difficulties that are met with in keeping to the rules of war while making these requisitions have been overcome. A system of collecting stations, of depots, and of organizations for distribution was arranged which solved the difficulties of transportation, infused new blood into industry at home, and gave it a firmer and more secure basis. [This quotation is from the report of a lecture by Dr. Rathenau published in the *Zeitschrift des oesterreichischen Ingenieur- und Architektenvereines* of April 21, 1916.]

For the conduct of the war and for her manufactures Germany needs vast stocks of metal. The Rathenau Plan, under the direction of the President of the General Electric Company, was directed especially toward supplying this need. Every scrap of metal in the conquered countries that could possibly be seized has been confiscated. The ordinance below is given here as an example of the thoroughness of the system of requisitions. The prices to be paid were entirely too low and the sixth section shows that the German authorities did not expect that the owners of the property would be satisfied with the price that was to be paid.

The following ordinance was issued at Brussels under date of December 13, 1916:

Section 1. The following designated objects are hereby seized and must be delivered.

Section 2. Movable and fixed household articles made of copper, tin, nickel, brass, bronze, or tombac, whatever their state:

1. Kitchen utensils, metal ware, and household utensils, except cutlery.
2. Wash basins, bathtubs, warm-water heaters, and reservoirs.
3. Individual or firm name-plates in and on the houses, door-knobs, knockers, and metal decorations on doors and carriages not necessary for locking.
4. Curtain rods and holders and stair-carpet fixtures.
5. Scales.
6. All other household articles or adornments made of tin.

The articles included under the numerals 1–6 are subject to seizure and delivery even when not contained in households in the narrow sense, but in other inhabited or uninhabited buildings and rooms (e.g., offices of authorities, office rooms in factories, and entries).

Section 3. Exempt from seizure and delivery:

1. Articles on and in churches and other buildings and rooms dedicated to religious services.

2. Articles in hospitals and clinics, as well as in the private offices of physicians, apothecaries, and healers, so far as these articles are essential to the care of the sick or the practise of medicine and cannot be replaced.

3. Articles in public buildings.

4. Articles which are part of commercial or industrial stores either designated for sale or useful in the business. For these articles a special decree is enacted.

. . . . . .

Section 5. *Obligation to deliver.*—Articles of artistic or historic value, if so recognized by the Bureau of Delivery, need not be delivered.

The Bureau of Delivery may for unusual cause grant exemption from delivery.

Section 6. *Indemnity.*—The following prices will be paid for the delivered articles:

Copper, per kilo...	4 francs	Brass.....	3 francs
Tin.....	7.50 "	Bronze.....	3 "
Nickel.....	13 "	Tombac.....	3 "

The payment will take place on the basis of the estimate made by the Bureau of Delivery. Payment will be made to the deliverer without question of his ownership.

Section 7. *Refers to persons and corporations affected by this decree.*

Section 8. *Confiscation.*—[Failure to comply with the provisions of the decree entails confiscation.]

Section 9. *Co-operation of communities.*—[Local authorities ordered to co-operate in execution of this order.]

A list of articles acquired by confiscation or forced sale in Belgium, compiled from the official ordinances, includes:

I. Minerals and Metals (48 items)
II. Chemicals (19 items)
III. Machinery, etc. (18 items)
IV. Food (9 items, including all bread grains as one item)
V. Clothing (18 items)
VI. Textiles (37 items)
VII. Household articles (when made of copper, bronze, brass, tombac, nickel, or tin, 34 items)

VIII. Old material (20 items)
IX. Oils and explosives (11 items)
X. Metal products for industrial establishments (33 items)
XI. Medical supplies (6 items)
XII. Miscellaneous (24 items)
(Total, 277 items)

In addition, the German authorities regulate and control the sale of most of the wares which have not been confiscated by them.

Some industries which were not directly useful to the Germans had been allowed to resume work in whole or in part. In doing this the German officials in Belgium had aroused anger in Germany, as the Belgian industries competed with German manufacturers. The latter are not willing to permit any competition on the part of the conquered peoples, as is shown by the comment on the attempt to renew the making of glass in Belgium.

To quote Dr. Goetze, head of the union of glassmakers in Germany:

> It had become vital before the war to the German manufacturers of glasswares that the Belgian manufactures should be stopped from going to neutral markets, and it must be admitted that the German Civil Administration has fully recognized the necessity of arranging this matter according to the demands of the German industry, and that it has taken suitable action.

In spite of this some Belgian shops were able to do some exporting and had affected the market price. "Measures must be taken to stop this."

Because of the attitude of the German manufacturers the German authorities in Belgium were in a very difficult situation. The German government felt that they must make an explanation to the German public and accordingly the following "inspired" article was published in a paper.

> The opinion seems to be widespread in many circles at home that the scepter was wielded too mildly in the conquered country; voices have been heard which cry, "Become harsh," which raise the reproach that the enemy's country is being treated as if it were our own; voices which blame the German Government in Belgium for troubling itself about the revival of trade and industry, instead of decimating the whole country economically and giving the death-blow to its power of competition. Such criticisms exhibit a shortsighted judgment of the tasks which are to be carried out in Belgium and of what has been accomplished hitherto. All exaggerated

mildness, all sentimentality, must be avoided and are being avoided, but true strength will always be just; severe at need, but not unnecessarily harsh. With such a principle the conqueror only pursues his own deepest interests. Or should he, perchance, by vexatious and arbitrary treatment, drive the already grievously incensed nation, in the rear of his own army, to despair? The German Government in Belgium does all it possibly can to set trade and traffic going again and to provide earnings and bread for the working classes, not in order to pay Belgium loving services thereby, but in order to prevent famine and disease behind the front of our army from endangering their safety and health. It has therefore willingly lent its hand to the procuring of food for the distressed population from neutral countries in order to spare our home supplies and to save our own troops from privations. It has permitted the needful supplies of coal to be forwarded. Competition against our home production cannot arise thereby, for only so much can be forwarded to Belgium as is necessary for the bare needs of its freezing people and of its industry, which is prolonging a painful existence. With farsighted understanding the Government is also endeavoring to introduce institutions for social amelioration, which the Belgian Government—perhaps out of regard for the increase of the costs of production which would have resulted therefrom—had hitherto neglected. If the labor and productivity in the country is thus gradually increased again by this means, then the occupying troops, as well as the country, get the advantage of this, for they also have to resort to the products of the country for their needs. And then, how is Belgium to provide the financial payments which are imposed upon her if her vital energy is sapped? [From the *Norddeutsche allgemeine Zeitung*, December 29, 1914.]

The success of the Rathenau Plan can also be seen in the following quotations from other papers:

There have been great difficulties, as far as raw material, copper, tin, etc., are concerned, in keeping up manufacturing in the German shops for making machine tools. Thanks to the confiscations, the army administration is certain not to run out of the necessary metals before the end of the war. [From *Der praktische Machinenkonstrukter*, October 24, 1915; quoted in *Informations Belges*, No. 488.]

After the war the French and the Belgian competition will no longer be dangerous because of the destruction brought about by the war. [From *Exports*, December 28, 1915; quoted in *Informations Belges*, No. 488.]

Most instructive is part of an article by Herr Ganghofer, containing some frank statements which he was not allowed to reprint in his book *Journey to the German Front*, which he published later:

All the work is done there on the principle that as little as possible of what the army needs is to be brought from Germany, that as much as

possible is to be got from the conquered enemy country, and that everything that is necessary for the army or useful to Germany is to be taken to Germany. For three months about four-fifths of the army's needs were supplied by the conquered country. Even now, although the exhausted sources in the land occupied by us are beginning to yield less abundantly, the conquered territory is still supplying two-thirds of the needs of the German army in the West. Because of this, for the last four months the German Empire has saved an average of 3,500,000 to 4,000,000 marks a day. This profit which the Germans have secured by their victory is very greatly increased by another means. That is the economic war which, in accordance with the rules of international law, is being carried on against the conquered land by the exhaustion of the goods which belong to the State, which are being carried to Germany from Belgium and Northern France. What Germany saves and gains by this economic war, carried on in a business-like way, can be reckoned at a further 6,000,000 to 7,000,000 marks a day. Thus the entire profit which the German Empire has made behind its Western Front since the beginning of the war can be estimated at about 2,000,000,000 marks. [From the *Münchner neueste Nachrichten*, February 26, 1915.]

3. GERMAN GAINS IN THE EAST[1]

Germany, through her conquests in the East, is endeavoring, under the leadership of her economists and industrialists, to build up a great economic empire, which will be eventually, as far as possible, self-sufficient. She is aiming to acquire control over sources of raw material so that in the end her industries may not be forced to rely on foreign sources for their supplies. In other words, she is trying to weld into a solid block of territory an empire similar to that now possessed by England in the form of scattered possessions held together by her fleet. The acquisition of Western Russia and a large part of the Balkans, which has already been practically accomplished, is in reality only the beginning of the German plan. Nevertheless the control of these regions brings to Germany very important economic advantages, which it is interesting to examine in detail.

I. UKRAINIA

By far the most valuable region of Russia from an economic standpoint is that lying between Poland and the Sea of Azov, comprising the valleys of the rivers flowing into the Black Sea. This is

[1] Adapted from "The Resources of an Industrial Empire in Mittel-Europa," *The Americas*, IV, No. 7, pp. 1–7. Copyright by the National City Bank of New York, 1918.

the region recently erected into the new state of Ukrainia, nominally independent. German troops are now in control of practically the whole of this region, and under the treaty of peace signed between the Teutonic powers and the Ukrainian representatives, Ukrainian products are to be exported freely to Germany and her Allies.

The Ukraine region includes agricultural, industrial, and mining districts, and includes among its products foodstuffs such as grain, sugar, grapes, and tobacco; textile materials such as hemp and wool; ores such as iron, manganese, and phosphates, as well as coal, both anthracite and bituminous. The industries include iron and steel manufacture, textile spinning and weaving, and sugar refining. Ukrainia is one of the most densely populated parts of Russia, averaging between 150 and 200 inhabitants to the square mile, and contains a number of large cities.

The four provinces of Kiev, Podolia, Poltava, and Kharkov before the war furnished also a large part of the surplus wheat which was exported from Odessa and the other Black Sea ports. Phosphate rock, it is to be noted, one of the necessary ingredients of fertilizers, is found in quantity in Podolia, Bessarabia, and Kursk.

Should German enterprise undertake to develop this region, applying scientific methods, it might be possible to increase the crops so as to go far toward supplying the needs of Germany. German imports of wheat before the war (in 1913) were 73,766,000 bushels. The exports of all Russia in 1913 were 122,336,000 bushels, of which a considerable part came from the Ukrainian provinces. With the disorganization of the revolution the output has declined greatly, and it is not believed that it will be possible for Germany to obtain large supplies from the 1917–18 crop. Reorganization must be a process of several years.

The black-earth region also produces a large exportable surplus of beet sugar, the total area planted in beets normally being nearly 2,000,000 acres. Sugar factories in the provinces of Kiev, Podolia, and Volhynia produced in 1914–15 about 1,060,000 tons of sugar. Recently, owing to the breakdown of the transportation system and the difficulty of obtaining oil, the factories have been forced to shut down. The surplus stocks of sugar are believed largely to have been used up. The sugar crop represents a large item in the wealth of this part of Russia and in its exports. Germany, however, has herself normally a surplus production of sugar and hence would be unlikely to import any of the Ukrainian crop.

In the more southerly part of this region, in the provinces of Bessarabia and Kherson, corn is raised. The climate is mild and vast areas are covered with vineyards and fruit orchards. Market gardening is also carried on by Bulgarians, while a fine grade of tobacco is raised in Poltava and in Taurida on the Black Sea. Germany before the war raised only a fraction of the tobacco she consumed, and imported 91,385 tons, in 1913. Some of this was imported from Austria-Hungary, but the Austrian production also fell short of supplying home demands.

The annual crop of hemp in the Ukraine area approximates 80,000 tons of fiber. For years the greater part of this was exported to Germany. German factories are equipped to manufacture hemp yarn, which is made into cordage, bagging, netting, etc. Hemp will presumably play a large part in German economics in case the supply of jute is permanently cut off.

The mineral resources of the Ukraine are also of very great economic importance. The iron mines of Krivoi Rog, in the provinces of Ekaterinoslav and Kherson, are among the richest in Europe, and are strategically situated within a short distance of the great coal-mining area of the Donetz basin. They are also within easy reach of the Black Sea. A large iron and steel industry, supplying before the war 70 per cent of the entire Russian production, has been developed at Ekaterinoslav and Kiev. British, French, and Belgian capital was largely instrumental in building up this industry. To place the output back at the point it had reached before the war would necessitate a reorganization of the mills and especially of the railroads supplying the coal, and a complete stabilization of the government in this district, where affairs have been very chaotic.

The Donetz coal mines, east of the Krivoi Rog district, have for some years been the chief source of supply for all Russia. The Donetz mines, with intensive development, are also believed to be capable of greatly increased production, thus permitting of a considerable exportation to the Central Powers. The reserves are enormous and have been estimated as greater than those of the United States. Another estimate puts the total contents of the fields at 70 billion tons. The control of this great supply of coal would undoubtedly be of great strategic and commercial advantage to the Germans.

It is not unlikely that one of the most important resources of the entire Ukraine from the German standpoint will prove to be her

deposits of manganese. This rare metal, which is a necessity to any nation developing an independent steel industry, is found only in a few places scattered over the world. Germany, as far as is known, has within her borders no sources capable of supplying anything like the quantity her steel foundries require. During the war she is believed to have existed largely on reserves laid up in time of peace. The leaders of the German Steel Trust have long looked forward to the day when an adequate supply of manganese might come under direct German control. Germany's imports before the war were about 500,000 tons annually, in the shape of ore, of which the greater part came from Russia. The largest Russian output is from the Caucasus, in the region to be annexed to Turkey, according to the peace treaty, but the second most important mines are near Nikopol, on the Dnieper River, about 60 miles southwest of the Krivoi Rog iron mines.

II. THE CAUCASUS

A scarcely less valuable region than the Ukraine from the standpoint of the planners of a Mittel-Europa economic empire is that assigned to Turkey as her share of the spoils, which includes a large part of the Caucasus and the peninsula of the Crimea. The Caucasian Mountain chain is rich in minerals and oil, while the valleys of Trans-Caucasia, along the shores of the Black Sea, have a climate mild enough for certain semitropical agricultural products.

The oil wells of the Caucasus are world-famous. Oil is one of Germany's greatest needs. The wells in Galicia and Roumania are almost the only large sources within the present boundaries of Teutonic power, as the native German production is small. The Caspian Sea region, however, could supply many times the amount needed by the Central Powers, even without further development.

Trans-Caucasia also produces very large quantities of manganese; in fact, before the war it was one of the chief sources of supply for the entire world.

The hills near the Black Sea shore southwest of Batum are known to contain copper ore, and near Batum a British company has a large mine. The abundant water-power of the region is favorable to a much greater growth of the electrolytic method of refining. The production of copper in the Caucasus in 1913 was 9,900 tons, and could eventually be largely increased, although the mines have been shut down for three years. The need of Germany for adequate

supplies of copper is well known. Her imports before the war were in the vicinity of 200,000 tons annually.

Zinc and lead are found in considerable deposits in various parts of the Caucasus and are mined near Vladikavkaz, on the northern side of the Caucasian Mountain chain. Pyrites from which sulphur is produced is mined to the extent of 5,000 tons a year. Bituminous coal is also mined in relatively small quantities. Other valuable mineral products are asbestos and asphalt.

Of the agricultural products of the Caucasus probably the one most coveted by the Teutons is cotton. The immense cotton industry of the Central Powers is entirely dependent on imported cotton, which came before the war from the United States and the British possessions of Egypt and India. A supply of cotton after the war is vitally necessary to the economic life of Germany and Austria. They could therefore be expected to make as much use as possible of the Russian output, although as at present developed it can do very little toward supplying their needs. Germany in 1912 imported 457,784 tons of raw cotton. The entire production of all Russia in 1914 was 677,299 tons, but this was wholly used in native Russian factories. In fact, until within a year or two the Russian production has been considerably less than enough to supply the domestic demand. The main Russian cotton-growing section is in Central Asia, in the provinces of Ferghana, Syr-Daria, and Samarkand, far beyond the present limits of penetration by the German armies. Russian disorganization, however, might allow of German economic penetration even as far as this. The cotton production of the Caucasus was increasing rapidly up to the time when military events checked it, and in 1914 amounted to 133,400 tons.

The cotton lands of the Caucasus stretch across the isthmus from Batum to the Caspian, and southward in patches as far as Mt. Ararat, where the old frontiers of Turkey, Persia, and Russia met. Cotton is also raised in Northern Persia and in various parts of Turkey. The extension of the area is dependent on the construction of irrigation systems leading from the rivers in whose valleys the best grade of cotton grows. The imperial Russian government, previous to 1914, had been very active in promoting this industry through irrigation and colonization. A very great expansion is believed to be possible, although it would probably require several years to get results.

Silk culture had only been recently developed in the Caucasus when the war broke out, but was proving very successful. However, compared to Germany's requirements, the output is small.

The Caucasus is also the only tea-growing region in Europe or Western Asia. In scattered plantations along the Black Sea coast are produced over 1,000,000 lbs. annually of a very good quality of tea. The same district produces the tobacco from which most Russian cigarettes are made. In addition, many kinds of semitropical fruits are grown, such as oranges, lemons, olives, pomegranates, etc.

Turkey is claiming in addition to the Caucasus, as her part of the spoils, the peninsula of the Crimea. The Kerch district of the Crimea contains iron mines second only in importance to those of Krivoi Rog.

The economic importance of these regions assigned to Turkey by the builders of Mittel-Europa is very great. They fill out the portion of the shores of the Black Sea not occupied by Ukraine or the members of the Teutonic alliance, and thus complete the transformation of that body of water into a German lake.

III. POLAND AND NORTH RUSSIAN PROVINCES

It remains to speak of the frontier provinces north of Ukrainia, which are apparently in process of being either annexed or absorbed by the Germans. Directly bordering on Ukrainia to the north is Poland, now theoretically an independent nation under Teutonic protection. Poland is an industrial and manufacturing region, with a relatively dense population and several large cities. The Germans have been in possession of Poland since 1915, and so have been taking advantage of its resources for two and a half years. Its organization under German rule was made easier by the large Teutonic influence already existing there—the factories were in many cases owned by German capital, the workmen were in part Germans, and many of the owners of the large agricultural estates were Germans.

The advantages which would accrue to Germany from the possession, actual or practical, of this industrious and normally prosperous region, over which the war has exercised a temporarily destructive effect, rest perhaps chiefly on the fact that the German industrialists and agriculturalists, who have long had a strong hold on the country, would then be enabled to make complete their domination. Many Germans would be repatriated, and their labors added to the sum total of the Empire.

The remaining region of Russia in danger of coming under German rule is that of the Baltic provinces—Lithuania, Livonia, Courland, Esthonia, and perhaps Petrograd. The population is sparser than in the regions to the southward, and there are few large cities. Their outlet is to the Baltic, which appears to be marked out for another German lake by the militarists. They are in the main agricultural districts, with industrial growth in the various centers. Petrograd is the business and commercial center. The main agricultural product of value in many parts is flax, a textile material which the Germans may utilize to some extent to make up for their lack of cotton and wool. Russia is the world's chief flax-producing country, and the districts where it is raised include all of North Central Russia as well as the Baltic provinces. Germany's imports of flax in 1912 were 50,539 tons of fibre, almost all of which came from Russia. Possession of the flax-growing regions would enable the Germans better to organize this trade.

Finland, to the north and west of Petrograd, is also a region of vast water-power, resembling Norway in that respect. The so-called Imatra water-power project, in which German capital was interested before the war, is believed capable of producing sufficient power for the entire Finnish railway system, as well as for the city of Petrograd and near-by cities in Finland. Finland exports normally some 120,000 tons of paper and even larger quantities of cellulose. The lumber resources are very large.

IV. ROUMANIA

In addition to Russia, the Mittel-Europa scheme appears to include more or less of German control over Roumania, the only one of the Balkan States possessing economic resources of world-importance. Roumania's main exports are petroleum and grain, both very valuable to Germany. The petroleum production is about 1,800,000 tons a year, or practically sufficient to supply the entire demands of the Central Powers. Under the treaty of peace recently signed the entire exploitation of petroleum in Roumania is to be under Austro-German control. Together with the wells in Galicia, it would appear that with this supply it would not be necessary for Germany to acquire the wells of the Caucasus. The control of the latter, however, would be a powerful weapon in the hands of the Germans for use against other nations desiring the Russian oil.

The cereals produced for export by Roumania are wheat, corn, oats, barley, and rye. The following table indicates how far Roumania alone can go to supply the cereal needs of the Central Powers.

	Roumania's Exports in 1913	Net Imports of Germany and Austria in 1913	
	Bushels		Bushels
Wheat	50,406,000		73,766,000
Corn	42,725,000		61,979,000
Oats	2,000,000	(Exported)	8,953,000
Barley	10,928,000		140,258,000
Rye	2,481,000	(Exported)	51,947,000

V. Economic Limitations of Mittel-Europa

The main lack of the economic empire as at present developed by Germany appears to be that it nowhere enters the tropics, and that therefore Germany is entirely cut off from tropical products. One of the most important groups of these products is that of the gums and resins, including rubber, gutta-percha, gutta-joolatong, and other kindred juices. Germany in 1912 imported 15,632 tons of rubber alone, and 104,860 tons of resins. Synthetic rubber would appear to be the only possible source of this commodity within the German Empire.

Another great group of products not adequately produced in the Empire is that of oils and fats. The exhaustion of flocks, due to their killing off for meat, has reduced the output of animal fats, and the vegetable oils are derived largely from tropical products like copra, from the cocoanut, and palm fruit. The imports of linseed and flax-seed oil from Russia help the situation in some degree, but the cutting off of the supplies of cottonseed oil from America cannot easily be remedied. The extent to which fish oil can be used as a substitute is problematical.

In the textiles also Germany is weak. The Russian and Turkish cotton fields can hardly support the Empire until after a number of years, if they can ever do so. The loss of the Australian and Argentine wool can be made up only in small measure by the Russian and Turkish supplies.

As to silk, Germany's imports in 1912 were 15,740,000 lbs., while the combined production of Austria-Hungary, the Balkans, Turkey,

the Caucasus, and Persia was only 4,802,000 lbs. How much the lack of these materials could be made up by the importation of flax from Russia is also problematical. The hemp production of the Ukraine, however, may go far toward replacing the lack of jute.

The lack of tropical territory, of course, entails a loss of a vast number of minor food products, such as bananas, coffee, cocoa, rice, spices, etc. On the other hand, the main food elements, including cereals and fruits, appear to be present or capable of being developed in sufficient quantities in the Empire. In time the supply of meat could, in all probability, be made sufficient.

Among the minerals, the most serious lack outside of that of nitrates, which will be replaced very largely by the artificial nitrate industry that has grown up during the war, seems to be of nickel and aluminum. There may also be a shortage of tungsten for high-speed steel, as it is not known to what extent this rare metal has recently been discovered in Germany. The supplies of aluminum are likewise uncertain, although in 1912 Germany imported 16,038 tons of this metal. It is to be noted that there are large mines of aluminum ore in Switzerland. Nickel is not mined in European Russia, and the German production falls far short of the demand.

It is thus obvious that a German Empire comprising only the regions already under German control falls short in several respects of being economically self-sufficient. There is a direction, however, in which German effort already shows signs of turning, which might lead to a completion of the economic structure. This is the road to India, which leads to supplies of cotton, wool, vegetable oils, rubber, hides and skins, and many other products now lacking in the German scheme.

VII. Human Attitudes, Rational or Otherwise

1. WHY WAR PERSISTS DESPITE ITS IRRATIONAL CHARACTER[1]

Now to these outworn notions of economic nationalism add another factor—one which the pro-military critic seems to imagine the civilist overlooks, though it is in reality the basis of the whole case, the most important fact in all this discussion—namely, that the element in man which makes him capable, however feebly, of choice

[1] By Norman Angell (see p. 9). Adapted from *Arms and Industry*, pp. xxiii–xxxvii. Published by G. P. Putnam's Sons, 1914. Cf. also "Industrial Penetration," p. 26, above.

in the matter of conduct, the one fact distinguishing him from that vast multitude of living things which act unreflectingly, is something not deeply rooted, since it is the latest addition of all to our nature. The really deeply rooted motives of conduct, those having by far the greatest biological momentum, are naturally the "motives" of the plant and the animal, the kind that marks in the main the acts of all living things save man, the unreflecting motives, those containing no element of ratiocination and free volition, that almost mechanical reaction to external forces which draw the leaves towards the sun rays and makes the tiger tear its living food limb from limb.

To make plain what that really means in human conduct, we must recall the character of that process by which man turns the forces of nature to his service instead of allowing them to overwhelm him. We saw that its essence was a union of individual forces against the common enemy, the forces of nature. Where men in isolated action would have been powerless and would have been destroyed, union, association, co-operation, enabled them to survive. Survival was contingent upon the cessation of struggle between them, and the substitution therefor of common action. Now the process both in the beginning and in the subsequent development of this device of co-operation is important. It was born of a failure of force. If the isolated force had sufficed, the union of force would not have been resorted to. But such union is not a mere mechanical multiplication of blind energies; it is a combination involving will, intelligence. If mere multiplication of physical energy had determined the result of man's struggles he would have been destroyed or be the helpless slave of the animals of which he makes his food. He has overcome them as he has overcome the flood and the storm—by quite another order of action. Intelligence only emerges where physical force is ineffective.

I have already in this summary touched upon, and in the pages that follow more fully described, the almost mechanical process by which, as the complexity of co-operation grows, the element of physical compulsion declines in effectiveness and is replaced by agreement based on mutual recognition of advantage. There is through every step of the development the same phenomenon: intelligence and agreement only emerge as force becomes ineffective. In human relations it generally becomes ineffective through resistance. The early (and purely illustrative) slave owner, who spent his days seeing that his slave did not run away and compelling him to work, realized

the economic defect of the arrangement; most of the effort, physical and intellectual, of the slave was devoted to trying to escape; that of the owner, to trying to prevent him. The force of the one, intellectual or physical, cancelled the force of the other, and the energies of both were lost so far as productive value was concerned, and the needed task, the building of the shelter or the catching of the fish, was not done or badly done, and both went short as to food and shelter. But from the moment that they struck a bargain as to the division of labour and of spoils and adhered to it, the full energies of both were liberated for direct production, and the economic effectiveness of the arrangement was not merely doubled, but probably multiplied many times. But this substitution of free agreement for coercion, with all that it implied of contract, of "what is fair," and all that followed of mutual reliance in the fulfilment of the agreement, was *based upon mutual recognition of advantages*. Now that recognition, without which the arrangement could not exist at all, required relatively a considerable mental effort *due in the first instance to the failure of force*. If the slave owner had had more effective means of physical coercion, and had been able to subdue his slave, he would not have bothered about agreement, and this embryo of human society and justice would not have been brought into being. And in history, as soon as one party or the other obtained such preponderance of strength as promised to be effective, he showed a tendency to drop free agreement and use force; this of course immediately provoked the resistance of the other, with a reversion to the earlier profitless condition.

This perpetual tendency to abandon the social arrangement and resort to physical coercion is, of course, easily explainable by the biological fact just touched on. To realize at each turn and permutation of the division of labour that the social arrangement was, after all, the best, demanded on the part of the two characters in our sketch, not merely control of instinctive actions, but a relatively large ratiocinative effort for which the biological history of early man had not fitted him. The physical act of compulsion required only a stone axe and a quickness of purely physical movement for which his biological history had afforded infinitely long training. The more mentally motived action, that of social conduct, demanding reflection as to its effect on others and the effect of that reaction upon our own position and a conscious control of physical acts, is of modern growth; it is but skin deep; its biological momentum is feeble. Yet on that feeble structure has been built all civilization.

2. PATRIOTISM AND SELFISHNESS CANNOT BE ISOLATED[1]

If you look at a human being as he lives in the world, instead of treating him as an abstraction, there is simply no way of isolating what is called the economic from the patriotic motive. They are both aspects of the business of life, the business of getting on. The fixing of frontiers is a real estate operation. Because real estate is involved, you can call the patriotism which surrounds it a masquerade.

But the truer thing to say, it seems to me, is that patriotism envelops the real estate because the real estate nourishes the lives and careers of the patriots. And the local patriots will fight for their real estate, and some of them will die that others may keep it. That is the riddle about patriotism in its relation to economics.

The riddle, I fancy, may perhaps be read in some such way as this: Out of our childhood rises a stream of appetite colored by our earliest attachments. It seeks to satisfy itself, to magnify its importance, to protect what statesmen call its prestige and satirists call its vanity. This stream flows into the channels of business opportunity. By real estate or selling shoes our appetites search for their food. But in the process the forms of business are overlaid with our emotion. We wrap ourselves around our money-making and transfigure it. It is identified then with all that is most precious. The export of bicycles or steel rails is no longer the cold-blooded thing it looks like in statistical reports of commerce. It is integrated with our passion. It is wife and children and being respected. So when trade is attacked, we are attacked. The thing which was a means to an end has become part of ourselves. We are ready to fight and die for it because it taps the loyalties which are what we are.

Passion seems to be able to feed upon almost anything from the thinnest dreams to the export of copper. But whatever it does feed upon is for the time being the passion itself. When copper exports are attacked, it isn't reasoned calculation alone which makes the decision for action. It is the feeling of the people whose passion is fused with the copper trade.

How does it happen, though, that the people not concerned in a special interest are so ready to defend it against the world? Plain men who have no financial interest in copper will feel aggrieved if

[1] By Walter Lippmann (see p. 54). Adapted from *The Stakes of Diplomacy*, pp. 74–81. Copyright by Henry Holt & Co., 1915.

American copper interests in a foreign land are attacked. The German people felt "humiliated" because German trade was thwarted in Morocco.

The most obvious reason for this is that the private citizens are in the main abysmally ignorant of what the real stakes of diplomacy are. They do not think in terms of railroad concessions, mines, banking, and trade. When they envisage Morocco they do not think of the Mannesmann Brothers, but of "German prestige" and "French influence." When the Triple Entente compelled Germany to recede in the Moroccan affair of 1911, the rage of the German people was not due to a counting of their economic losses. They were furious, not that they had lost Morocco, but that they had lost the dispute. There is small doubt that the masses of people in no country would risk war to secure mining concessions in Africa. But the choice is never presented to them that way. Each contest for economic privileges appears to the public as a kind of sporting event with loaded weapons. The people wish their team, that is, their country, to win. Just as strong men will weep because the second baseman fumbles at the crucial moment, so they will go into tantrums of rage because corporations of their own nationality are thwarted in a commercial ambition.

They may have nothing tangible to gain or lose by the transaction; certainly they do not know whether they have. But they feel that "our" trade is their own, and though they share few of its profits they watch its career with tender solicitude. Above all, they feel that if "our" German traders are beaten in Morocco, the whole value of being a German has been somewhat lessened. Trade-marks like "Made in Germany" were a constant humiliation to Englishmen, even though they were glad to buy the goods because they were cheaper and better. But when from all over the world Englishmen came home beaten by a greater vitality and more modern organization, their damaged pocketbooks were only the smallest part of their loss. The real wound was the wound of self-respect, the lurking fear that there has been a depreciation in Englishmen. The fear is emphasized by the public opinion of the world which judges by trade efficiency and asks heartrending questions like: Is England decadent? Friendly critics rub salt into the wound by commenting on the obsolete machinery of British manufacture, the archaic habits of British merchants. Is it any wonder that what starts as a loss of dollars and cents is soon transfigured into a loss of the Englishman's importance in the world?

But when you attack that you attack the sources of his patriotism, and when he starts to reassert his importance, the proceeding has ceased to appear as a commercial enterprise. It has become a defense of British civilization.

This is the mood for a strong foreign policy, which means a policy that uses political power to increase national prestige. The way to increase national prestige is to win economic victories by diplomatic methods. British diplomacy has been winning them for fifteen years —in Egypt, Persia, Africa. While Germany was capturing trade, Great Britain was scoring the diplomatic victories—the greatest of them being that in Morocco.

The actual trade of Morocco was insignificant in the mêlée. Morocco became the bone on which Germany and England tested the sharpness of their teeth. The two populations cared very little for any particular iron mine, but they cared enormously about the standing of Englishmen and Germans in settling world-problems. National feeling was unloosened which overflowed the original dispute. Morocco meant not money but bad will, suspicion, fear, resentment. To the British it was evidence of German aggression; to the German it represented the tightening of the iron ring, the policy of encirclement. The strongest passions of defense in both countries were called into the European arena, and when both sides claim to be defensive I see no reason for questioning their sincerity. It is perfectly possible for two nations to feel attacked at the same time. In some such way as this patriotism becomes involved in business.

3. PLANS OF THE FINANCIAL INTERESTS[1]

The play of motives in war makes a baffling study of psychology. Nothing seemed clearer when this war broke out than that Germany invaded Belgium for purely strategic reasons. Her armies were turning the fortifications of the eastern frontiers of France and seeking an easy though roundabout way to Paris. As the war went on one began to doubt this obvious and relatively charitable explanation. In the first place, the military strategy was questionable. A strategy appropriate to Germany's avowed purpose would have sought a

[1] By H. N. Brailsford. Adapted from "The Age of Iron," *New Republic*, V (November, 1915, to January, 1916), 164–66. Copyright by the Republic Publishing Co.

Ed. Note.—H. N. Brailsford is one of the most brilliant of present-day English writers on social and economic subjects.

prompt and crushing military decision against Russia. France might have been held with relatively small forces on the line of the Vosges, Belgium need never have been invaded, and the German armies might have reached the Vistula as rapidly as they reached the Marne. In a war conducted on these lines Great Britain would not have intervened promptly, and had she intervened the country would have been as sharply divided as it was during the Boer War, though Sir Edward Grey, Mr. Lloyd George, and Mr. Churchill would probably have succeeded in the end in creating a coalition party for war.

Why was this natural and obvious strategy rejected? Through Belgium lay the natural road to Calais, and Calais means the ability to operate in the Atlantic and the power to compete with Britain for a colonial empire. The apparent stupidity involved in the occupation of Belgium vanishes when one realizes that the naval-colonial party was really acquiring a strategic point for a greater world-struggle in the future. But there was another and even simpler reason for the occupation of Belgium, and this was not strategical but economic. Belgium contains a rich coal field, and the north of France has not only coal fields but invaluable mines of iron ore. These mineral riches are advanced to-day by German industrialists as a reason why Belgium and the north of France must be permanently annexed. It is probable enough that in the desire to possess these great sources lay the real motive for the march through Belgium. For years the general staff had prepared its projects of invasion. When we ask why none of the middle-class parties in Germany protested during the calm years of peace against these plans as the Socialists did, the answer may very well be that they reckoned coldly on something more permanent than a momentary strategical advantage.

It is impossible to read the confidential memorandum which six of the most powerful industrial and agrarian leagues addressed to the German Chancellor last May without harboring this suspicion. The full text as it appeared in *L'Humanité* for August 11, 1915, is a startling self-revelation of the predatory mind. These people, be it remembered, are not soldiers, and their state of mind is not militarism but capitalism. They have pondered maturely on the question, Does conquest pay? and they think they have found the answer. Their program is the annexation of all Belgium, the French departments of Calais and the north, and French Lorraine. But that is not all.

They insist that all the great industrial undertakings of this large and populous region must pass into the actual ownership of Germans—the railways, canals, mines, and even the landed estates. They do not go so far as to suggest that the conquerors should expropriate the present owners without compensation, but they have an ingenious scheme for shifting the burden to the enemy's shoulders. The compensation must be paid, not by Germany which acquires this territory, but by France which loses it.

It has always seemed to me that Mr. Norman Angell, in spite of the brilliant illumination which he has thrown on the economics of war and peace, ignored the vast gains which the propertied classes draw from war, imperialism, and the armed peace. Their investments in the tropics, their economic tribute from India and Egypt, their exploitation of concession areas and spheres of influence, represent a direct return from the accumulation and use of naval and military power. About one-fourth of the income of the British propertied class is derived from investments overseas, and for these investments our navy is the indispensable insurance. A little war which wins Egypt or Burmah means direct profit to the contractors, the bondholders, the land syndicates, and oil trusts which exploit these regions. Mr. Angell is profoundly in the right when he argues that such conquests do not enrich a nation, but undoubtedly they may enrich a nation's propertied and governing class. In one sphere, however, socialistic critics were not inclined to dispute Mr. Angell's doctrine. I myself used to argue that his doctrine was absolutely true in its application to any completely developed area with an old civilization. It would not pay to conquer Lancashire or the Rhine district, because they are already fully capitalized. The conqueror could not invest in them and could not exploit them. An imperialistic capitalism turns to undeveloped countries, to cities without banks and routes without railways, partly because they are easier to conquer, but chiefly because they can absorb capital. In the face of this German program we must all revise our theories. If a conquering Germany could expropriate the capitalists of a conquered Belgium and France and take over all their organized industry at the cost of the vanquished, the adventure would be vastly more profitable to the German middle classes than any conceivable expansion in China, Africa, or Turkey. The German masses would have paid the price in blood and taxation, nor would they ever share in the wage-list of

the stolen mines. But German capitalists might indeed reckon on "wealth beyond the dreams of avarice."

The critical reader may at this point enter certain objections: the military power of Germany is not equal to the accomplishment of such a program; the world would never tolerate such naked robbery; France, if she were utterly crushed, would be unable to pay the indemnity; the cost of holding down this country would more than eat up the profits of exploiting it; finally, the German government is neither so ruthless nor so unwise as these capitalist leagues, and the Socialists (not to mention the Delbrück-Dernburg school) may be trusted to oppose them. All these objections are sound. The program cannot be realized, and for my part I am sure that the German Chancellor never entertained it. The fact remains that this project did and does inspire the dreams of the German capitalistic world. This project and others like it have formed their policy, shaped their dreams of world-power, and governed their unflinching support of a policy of great armaments. For a year past the whole English-speaking world has been discussing Prussian militarism and tracing it to the professors. Its real backing came rather from the conscious organized force of these capitalistic associations. For them militarism meant business, and they are now demanding the profits on their investment. When Prince Bülow challenged the German Socialists to the direct test of an election on the straight issues of militarism and imperialism, the funds for the electoral operations of his Liberal-Conservative coalition were openly found by the big metallurgical trade organizations (cartels). They assessed their members so that each employer contributed a mark for every workman he employed. The workman might vote for Bebel, but his master's shilling balanced his vote.

In all this capitalistic organization of German militarism and imperialism it was the industrialists of the metal trades that led. They form the backbone of the National Liberal party, which from the black country of the lower Rhine has dominated German foreign policy from the days of Bismarck downwards. One reason was that their industry made a great profit from armaments, but that was not the only reason. Once before the German iron industry all but involved Europe in war. It wanted Morocco, because Morocco contains a great store of admirable iron ore; and here of course the motives of the French colonial party were the same and their morals

no better. To-day it demands Belgium as yesterday it demanded Morocco. I do not want to exaggerate. It would be absurd to say that the Kaiser made his declaration of war because the Rhine trusts want French and Belgian coal and iron. But it is the sober truth that on the German side the whole policy which set Europe in two armed camps and so exasperated the struggle for a balance of power that it flamed into war was motived by the expectation of German capitalists that war would bring them concrete gains. Without the support of these National Liberal capitalists von Tirpitz could not have made his navy, and it was only the concessions of the Mannesmann Brothers which kept alive the German interest in Morocco. The driving motive of modern militarism is economic. Ours is the age of iron.

Lest it should seem that this article points a one-sided moral, it is necessary to indicate that the capitalistic strategy of the Allied countries is also busy with the problem, How can victory be made to pay? The wilder extremists in France have talked of conquering the German Rhine country. Our own imperialists reckon on retaining the German colonies and on acquiring Mesopotamia. But these are small gains. The real answer is to be sought in the various projects for destroying or laming the competition of German industry in the world's markets. Comprehensive schemes have been published by the Italian review, *Nuova Antologia;* Dr. Dillon and even Mr. Wells have made suggestions. If an ambition to secure coal and iron fields lay beneath German chauvinism and subconsciously prepared the middle classes for war, the parallel motive in this country and in Russia was trade jealousy. The anti-German feeling in England was in its origins little more than a phase of our protectionist movement. Even in Russia the simple old-world Pan-Slavist motive, which aspires to the domination of the Balkans and the conquest of Constantinople, and the allied Slavophil motive, which sees in Germany the home of Western progress and free thought, were reinforced by an economic motive. Apart altogether from the Balkan tangle, Russo-German relations were overshadowed last year by the imminence of a great tariff dispute. The commercial treaties fell to be renewed before 1916, and the small but influential world of Russian industrialism was already agitating for "liberation" from German domination, by which it meant the closing of the frontier to German goods, with which the artificial, immature industry of Russia

could not compete. The struggle had lasted only a few weeks when M. Bark, the Russian Minister of Finance, proposed in an interview in the Paris *Matin* that after the peace all the Allied nations should continue the war against Germany on the economic plane by penal tariffs and international boycotts. The predatory ambitions and commercial jealousies which cloak themselves during peace find in war their unashamed expression. War brings us our chance to see in its nakedness the world in which we live. European militarism is a savage survival which modern capitalism has adapted to its own purpose.

III

THE NATURE OF MODERN WAR

Introduction

The art of war has its basis in the industrial system, the social organization, and the conventions and traditions of a people. The military organization which is evident is the visible part of a complex organization of materials, men, and ideas which comprehends the social order. The army which engages the enemy three thousand miles from home is the cutting edge of a great and complex machine which ramifies into the utmost confines of the land, includes the activities of all sorts and conditions of men, and depends for its speed and efficiency upon the every-day habits and activities of ordinary people. All the aspects of the economic order, the medley of arrangements and relations which make it up, and the scheme of motives, ideals, and ends which give life to it can be assessed in terms of advancing or impairing military efficiency. It is the object of this section to show as definitely and concretely as possible the complex of economic forces which lies at the basis of military practice. To that end it is resolved into three parts.

The first of these divisions is concerned with the dependence of warfare upon the state of the industrial arts. Our notions about warfare and the values which we set upon it are largely fixed in our thought, being inheritances from feudal times, when it was largely a sporting event and battles resolved themselves into a series of single combats wherein personal alertness, strength, and valor counted for everything. Yet since that time warfare itself has changed radically. In fact, as Adam Smith shows (selection VIII, I), the length of the struggle, the character of the combat, the plan of organization, the larger strategy, are all dependent upon the nature of the industrial system and vary as that system varies. Adam Smith wrote too early to see the dependence of modern warfare upon the machine technique and the close interdependence of modern industries. But the other readings in this section indicate how profoundly warfare has been modified by the changes which have transformed a simple craft society into the industrial, pecuniary, and urban one which we know.

The second of these divisions is concerned with the utilization in war of industries, activities, and institutions which make up our industrial organization. How the whole range of science is made subservient to the exigencies of warfare, how railroad systems have military necessity written into their networks, and how "industrial energy" is appropriated and hurled upon an enemy are typical instances of the dependence of warfare upon the whole matrix of industrial life. These are but a few typical instances serving to give current reality and definiteness to the general principles of the preceding division.

The third of the divisions raises what may be called the problem of the larger economic strategy of war. It concerns the agencies, materials, and institutions mentioned above in their relation to each other and to military efficiency. In its simplest terms it raises two important questions. The first is, How can the largest surplus of our limited productive energy be taken away from the production of goods which satisfy civilian uses and be devoted to the production of the materials of war? The second is how to secure the greatest military effect; that is, how to apportion productive powers between the military organization and the production of the complementary goods required by the military program. These questions of economic strategy, which set the limits of military strategy, can be stated simply. But since their proper answer involves an adjustment of each industrial resource to every other industrial resource under a complex scheme of control and is contingent upon national tradition and personal habit, it is not easily forthcoming. Most of the work at Washington since the beginning of the war has aimed at finding an answer to these problems. A perspective of this problem and some of the larger problems involved in it are the subjects of discussion in the twelve chapters which follow.

VIII. War under Modern Industrial Conditions

1. WAR AND THE STATE OF THE INDUSTRIAL ARTS[1]

Among nations of hunters, the lowest and rudest state of society, such as we find among the native tribes of North America, every man is a warrior as well as a hunter. When he goes to war, either to defend

[1] By Adam Smith. Adapted from *An Inquiry into the Nature and Causes of the Wealth of Nations* (Wakefield edition), Book V, chap. i, pp. 1–12.

his society or to revenge the injuries which have been done to it by other societies, he maintains himself by his own labour in the same manner as when he lives at home. His society is at no sort of expense either to prepare him for the field or to maintain him while he is in it.

Among nations of shepherds, a more advanced state of society, such as we find among the Tartars and Arabs, every man is, in the same manner, a warrior. When a nomadic nation goes to war, the warriors will not trust their herds and flocks to the feeble defence of their old men, their women and children; and their old men, their women and children will not be left behind without defence and without subsistence. The whole nation takes the field in time of war. Whether it marches as an army or moves about as a company of herdsmen, the way of life is nearly the same, though the object proposed by it be very different.

The ordinary life, the ordinary exercises, of a Tartar or Arab, prepare him sufficiently for war. Running, wrestling, cudgel-playing, throwing the javelin, drawing the bow, etc., are the common pastimes of those who live in the open air, and are all of them the images of war. When a Tartar or Arab actually goes to war he is maintained by his own herds and flocks which he carries with him, in the same manner as in peace. Hence his chief or sovereign is at no sort of expense in preparing him for the field; and when he is in it the chance of plunder is the only pay which he either expects or requires.

In a yet more advanced state of society, among those nations of husbandmen who have little foreign commerce and no other manufactures but those coarse and household ones which almost every private family prepares for its own use, every man, in the same manner, either is a warrior or easily becomes such. They who live by agriculture generally pass the whole day in the open air, exposed to all the inclemencies of the seasons. The hardiness of their ordinary life prepares them for the fatigues of war, to some of which their necessary occupations bear a great analogy. The necessary occupation of a ditcher prepares him to work in the trenches and to fortify a camp as well as to enclose a field. The ordinary pastimes of such husbandmen are the same as those of shepherds, and are in the same manner the images of war. But as husbandmen have less leisure than shepherds they are not so frequently employed in those pastimes. They are soldiers, but soldiers not quite so much masters of their exercise. Such as they are, however, it seldoms costs the sovereign or commonwealth any expense to prepare them for the field.

Agriculture, even in its rudest and lowest state, supposes a settlement; some sort of fixed habitation which cannot be abandoned without great loss. When a nation of mere husbandmen, therefore, goes to war, the whole people cannot take the field together. The old men, the women and children, at least, must remain at home to take care of the habitation. All the men of military age, however, may take the field and, in small nations of this kind, have frequently done so. In every nation the men of military age are supposed to amount to about a fourth or a fifth of the whole body of the people. If the campaign too should begin after seedtime and end before harvest, both the husbandman and his principal labourers can be spared from the farm without much loss. He trusts that the work which must be done in the meantime can be well enough executed by the old men, the women, and the children. He is not unwilling, therefore, to serve without pay during a short campaign, and it frequently costs the sovereign or commonwealth as little to maintain him in the field as to prepare him for it. In the European monarchies, which were founded upon the ruins of the Roman Empire, both before and for some time after the establishment of what is properly called the feudal law, the great lords, with all their immediate dependents, used to serve the crown at their own expense. In the field, in the same manner as at home, they maintained themselves by their own revenue, and not by any stipend or pay which they received from the king upon that particular occasion.

In a more advanced state of society two different causes contribute to render it altogether impossible that they who take the field should maintain themselves at their own expense. Those two causes are the progress of manufacturers and the improvement in the art of war.

Though a husbandman should be employed in an expedition, provided it begins after seedtime and ends before harvest, the interruption of his business will not always occasion any considerable diminution of his revenue. Without the intervention of his labour, nature herself does the greater part of the work which remains to be done. But the moment that an artificer, a smith, a carpenter, or a weaver, for example, quits his workhouse, the sole source of his revenue is completely dried up. Nature does nothing for him, he does all for himself. When he takes the field, therefore, in defence of the public, as he has no revenue to maintain himself he must necessarily be maintained by the public. But in a country of which a great part

of the inhabitants are artificers and manufacturers, a great part of the people who go to war must be drawn from those classes, and must therefore be maintained by the public as long as they are employed in its service.

When the art of war too has gradually grown up to be a very intricate and complicated science, when the event of war ceases to be determined, as in the first ages of society, by a single irregular skirmish or battle, but when the contest is generally spun out through several different campaigns, each of which lasts during the greater part of the year, it becomes universally necessary that the public should maintain those who serve the public in war, at least while they are employed in that service. Whatever in time of peace might be the ordinary occupation of those who go to war, so very tedious and expensive a service would otherwise be by far too heavy a burden upon them. Under the feudal governments the military service both of the great lords and of their immediate dependents was, after a certain period, universally exchanged for a payment in money, which was employed to maintain those who served in their stead.

The expense of preparing the army for the field seems not to have become considerable in any nation till long after that of maintaining it in the field had devolved entirely upon the sovereign or commonwealth. Under the feudal governments the many public ordinances that the citizens of every district should practice archery, as well as several other military exercises, were intended for promoting the same purpose, but do not seem to have promoted it so well. Either from want of interest in the officers entrusted with the execution of those ordinances, or from some other cause, they appear to have been universally neglected; and in the progress of all those governments military exercises seem to have gone gradually into disuse among the great body of the people.

The art of war, however, as it is certainly the noblest of all arts, so in the progress of improvement it necessarily becomes one of the most complicated among them. The state of the mechanical, as well as of some other arts, with which it is necessarily connected, determines the degree of perfection to which it is capable of being carried at any particular time. But in order to carry it to this degree of perfection it is necessary that it should become the sole or principal occupation of a particular class of citizens, and the division of labour (employments) is as necessary for the improvement of this as of every

other art. It is the wisdom of the state only which can render the trade of a soldier a particular trade separate and distinct from all others. A private citizen who in time of profound peace and without any particular encouragement from the public should spend the greater part of his time in military exercises might, no doubt, both improve himself very much in them and amuse himself very well; but he certainly would not promote his own interest. It is the wisdom of the state only which can render it for his interest to give up the greater part of his time to this peculiar occupation.

A shepherd has a great deal of leisure; a husbandman, in the rude state of husbandry, has some; an artificer or manufacturer has none at all. The first may, without any loss, employ a great deal of his time in martial exercises; the second may employ some part of it; but the last cannot employ a single hour in them without some loss, and his attention to his own interest naturally leads him to neglect them altogether. Those improvements in husbandry, too, which the progress of arts and manufactures necessarily introduces, leave the husbandman as little leisure as the artificer. Military exercises come to be as much neglected by the inhabitants of the country as by those of the town, and the great body of the people becomes altogether unwarlike. That wealth, at the same time, which always follows the improvements of agriculture and manufactures, and which in reality is no more than the accumulated produce of those improvements, provokes the invasion of all their neighbors. An industrious and upon that account a wealthy nation is of all nations the most likely to be attacked; and unless the state takes some new measures for the public defence the natural habits of the people render them altogether incapable of defending themselves.

In these circumstances there seem to be but two methods by which the state can make any tolerable provision for the public defence.

It may either, first, by means of a very rigorous police, and in spite of the whole bent of the interest, genius, and inclinations of the people, enforce the practice of military exercises and oblige either all the citizens of the military age, or a certain number of them, to join in some measure the trade of a soldier to whatever other trade or profession they may happen to carry on.

Or, secondly, by maintaining and employing a certain number of citizens in the constant practice of military exercises it may render the trade of a soldier a particular trade, separate and distinct from all others.

2. THE DEPENDENCE OF WAR UPON ECONOMIC ORGANIZATION[1]

Before one can form an adequate conception of modern warfare one must get rid of two misconceptions which have been very prevalent in America. The first of these is the natural result of the habit of thinking of war only as a series of physical combats between the armed forces of opposing nations. Our predilection to this obviously fragmentary notion is due in part to the influence of the military men who, true to their training, describe war as the manipulation of armies in the field, as a matter of strategy and tactics. It is also due in part to man's innate propensity to look for the picturesque, rather than for the humdrum, workaday machinery behind the panoply of war. The second misconception from which it is necessary to free one's self is the illusion of dollars and cents. We are an excessively business-like people; that is, we are very prone to calculate everything in pecuniary terms. We take to the intricacies of war finance with relish, and the men whose opinions on the war we value highest are bankers and brokers and big-business men in general. Consequently we reckon victories by the flotation of war loans and defeats in the language of inflation.

A year's disillusioning experience in the work of war, however, has served to teach us that war is neither wholly nor even largely a matter of valor in the field and sound financial tone at home. Modern war is almost wholly a matter of industrial technique. It is an affair of office and factory.

Under modern conditions of transportation and large-scale machine production it is possible for a nation to throw its entire productive energy into the fight. The victory depends not only upon placing in the field soldiers who are most valorous, but also upon turning out the most destructive shells in quantities sufficient to deluge any or all parts of the enemy's line at will, the largest quantity of railroad equipment and auto trucks with which to make its artillery and infantry more mobile than those of the enemy, the largest quantity of airplanes with which to observe the enemy's movements, to bomb him behind his lines, and to bring down the planes which serve him for similar purposes. The world-supply of coal and metals is concentrated upon these tasks; therefore one must add the building

[1] By C. E. Ayres. From an unpublished essay.

Ed. Note.—Mr. Ayres is an instructor in philosophy in the University of Chicago and a frequent writer on economic as well as philosophical questions.

of merchant ships, transports, and a navy as instruments required for the transportation of raw materials and the finished products of munitions industries as well as men from all parts of the world. The successful accomplishment of this portion of the military program demands the diversion to munitions industries, including shipping, of millions of workers and of great quantities of all sorts of raw materials and products in the early stages of manufacture which would otherwise have been consumed in various ways by the civilian population. At the same time the transfer of men to the army and to munitions industries, the diversion of materials from the manufacture of farming implements to munitions, the devastation of fertile lands by the armies, and the exigencies of the shipping situation all serve to make the problems of feeding and clothing the civilian population—which is manning the munitions industries—of paramount importance.

Under modern conditions, therefore, war becomes a problem in the organization of a nation, so that the proportion of men engaged in holding the lines compared with the proportion of men assigned to making guns and shells, airplanes, transportation equipment, merchant and battle ships, and all other strictly military supplies, compared with the proportion of men who are engaged in raising and manufacturing just the amount of food and other necessities that is required to maintain the civilian population as well as the armies at maximum efficiency, shall be calculated to bring to realization the full strength of the nation.

Among the infinite variety of difficulties which this problem of organization presents three main types can be clearly discerned. An enumeration of them will serve to illustrate further the nature of modern war. First there is the difficulty of bringing the whole population into line with the requirements of the military situation—the difficulty of inducing men not only to allow themselves to be enlisted freely into the army and into military industries but, a rather more delicate thing, to permit their property to be used, and used up, if necessary, by the government. This is not a mere matter of investigation and decision. The human animal is very unplastic material—particularly where he has been habituated to the exercise of the prerogative of self-direction—that is, in so far as he has lived under democratic institutions. The remark has frequently been made by farsighted persons in this country as well as in Germany that the American scheme of training men to military service in one summer vacation at Plattsburg overlooks the fact that no soldier is truly

effective who has not been habituated to soldierly ways of thinking from childhood up. The same thing is true of the civilian population. No people is sufficiently plastic in the hands of its military organizers which has not been trained for more than a generation to submit readily to an indefinite number of things *verboten* and to look to superior authority for the properly authenticated version of every man's duty.[1] If a nation is to be successful in war it must look well to the scheme of highly centralized paternalism and feudal subservience to authority. Lacking a people trained to such a fine temper of obedience it must devise some means to induce its people to give over for the time being at least their supposed rights of self-direction and fit themselves as well as may be into that scheme of industrial organization which is the first prerequisite to victory.

Yet the temper of the people and the degree of their susceptibility to the appeal of the war lords is only one of the problems of the military organizer of a nation. A second resides in the fact that an organization itself cannot be brought into existence overnight. The industrial order is so complex that no one knows exactly how complex it is. It is so delicate that it cannot be completely reconstructed on the basis of any *a priori* plan no matter how skilfully that plan may have been constructed. If it is to be adapted to war, that adaptation must inevitably occupy a considerable time even under conditions of perfect wisdom on the part of the military organizers. Obviously it makes all the difference in the world what the industrial situation is to begin with. If there is no labor organization which commands the loyalty of all the laborers in a certain trade or industry, or if there is no central national labor exchange through which the demands for laborers in all parts of the nation take effect, if all the important war industries are broken up into a large number of small competing concerns which are bound together by no stronger tie than voluntary membership in trade associations, then the nature of the military situation clearly demands the institution of more highly centralized types of organization, such as will fall in more readily with the war-time policy of commanding whole trades. In distinguishing between reasonable and unreasonable restraint of trade a military government must bear in mind the services to be rendered by the combination in time of war; it must weigh the military need for a close-knit, centralized organization of each industry, readily convertible to war uses, against considerations of equity and justice to the consumer. If the

[1] Ed. Note.—Section XIX.

nation depends upon imports for important military supplies it must encourage the production of such military necessities at home by the offer of bounties and the levy of protective tariffs, thus holding out substantial pecuniary rewards to those business men who assist it in this task of perfecting the organization of the industrial structure for war.

One thing, however, industrial organization itself will not provide. Technical genius comes from other sources—this third difficulty must be met in other ways. Modern war is peculiarly a war of weapons; that is to say, the technique of fighting changes so rapidly under modern conditions that it is not sufficient to be able to produce and wield a given set of military paraphernalia. The successful nation is the one which can invent new weapons of offense faster than the enemy can devise means of defense and at the same time protect itself not too tardily from the new offensive weapons of the enemy. But this technical capacity is not a matter of sheer inventive genius; it depends upon the amount of technical knowledge which the nation can command in its scientific men and upon the readiness with which that knowledge can be turned to account. The military organizer is presented with the problem of seizing upon the whole available stock of scientific knowledge, of increasing it if there be time, and of diverting it from its function as an instrument for the discovery of further truth to those industrial channels in which it will best serve the military purpose. So far as the needs of modern war are concerned chemistry is the mine from which gas bombs and synthetic nitrates are extracted; history is the raw material out of which national propaganda may be manufactured. Victory casts her laurels upon the nation whose scientific genius invents the most atrocious weapons and the most convincing propaganda.

It must be clear from all this that modern war is no longer exclusively heroic. It is no longer decided entirely, or perhaps even primarily, by individual valor in the clash of arms. It has become a sordid affair of the machine process in which the real hero is as likely to be an engineer or a physicist as a dashing general. Its problems are the problems of the adaptability of the whole people to the discipline of war, of the organization of industrial monopolies and the creation of non-indigenous industries, of the utilization to the fullest extent of the scientific genius of a people. The game is played on the farm and in the factory; the armies merely tally up the score.

3. IT TAKES TIME TO DEVELOP SPECIALIZED MACHINERY[1]

It was on or about May 25 [1917] that the idea of an American motor was born. On the 28th Messrs. Hall and Vincent began their historic session. On June 4 the draft of the general design was complete and was submitted to a joint meeting of the Aircraft Board and the Army and Navy technical board. It was for an eight-cylinder engine that was to develop somewhere around 300 horse-power.

The joint board approved the design and forthwith orders were telegraphed to various shops to make the different parts *instanter*. Draftsmen worked feverishly over drawings, and there was much rushing back and forth.

Then, on July 3, twenty-eight days later, the parts were brought together from far and near and assembled into a motor that worked like a charm.

However, on foreign advice it was decided to increase the motor's power and make it a twelve-cylinder type. The twelve-cylinder model passed all tests with flying colors on August 25. A trip to Pike's Peak gave it an altitude experience. There were more drawings and more consultations and more changes, and finally, after August 25, the motor was ordered into quantity production. On October 29 the first motor that could be roughly called the result of quantity production was tried in a De Haviland 4, at Dayton, Ohio. The result was so satisfactory that everybody thought it was all over but the shouting for both plane and engine.

But presently troubles began to develop. Howard Coffin, chairman of the Aircraft Board, then appointed a committee of engineers to find out what the trouble was. This committee soon found that various parts of the motor were not strong enough and that others were not well adapted to it. The connecting-rods were found to be weak. The lubrication system worked splendidly on the ground but was inefficient in the air. The crankshaft was not strong enough, and so on.

This committee insisted on changes. Program or no program, they said, America could not afford to have anything but the best. It would never do to let a motor of exceptional design be ruined by mistakes in the parts. There was, of course, some trouble in getting

[1] Adapted from the *Literary Digest*, July 13, 1918, pp. 21–22.

the right amount of radiation. There always is in motors, and always will be. Sufficient radiation for the ground is too much for 12,000 feet. You must have too much or too little at some time. Finally, however, a satisfactory compromise was arranged in radiation.

It was not until April 28 that the committee of engineers made its final fifty-hour tests on motors with all the essential changes and improvements installed. Besides these basic changes there were a great many lesser alterations suggested, chiefly by the manufacturers, who kept in touch with each other through an unofficial committee and passed on all changes as they were suggested. The strengthening of the connecting-rods was, however, the chief cause of delay. That set back real quantity production at least seventy-five days.

In April the motors began to come out at the rate of fifteen or twenty a day. Production—now fifty a day—increases in volume weekly.

Testimony to the value of this motor was given in London on June 26 by Sir William Weir, new Secretary to the Air Ministry.

The results of the experiments so far obtained have placed the engine in the very first line of aeromotors. It is well understood that some criticism will be directed against the slowness of production of these motors during the last three or four months, but I would like to point out that a considerable interval will, and always must, elapse between the experimental and commercial production of any new motor.

Every engine, even the best designed and in a country with the greatest resources and facilities, cannot escape a period of what may be called 'teething troubles' before the motors can be produced on anything like a large scale.[1]

4. THE INSATIABLE DEMAND FOR MUNITIONS[2]

When an attack is planned against a securely entrenched enemy, with barbed wire everywhere, with elaborate communication trenches, and powerful long-range supporting artillery, the first necessity is to break down the wire and smash his first line of trenches. This means a heavy expenditure of field artillery, shrapnel, and trench

[1] As the report of the Thomas committee shows, delays have in part been due to mismanagement and favoritism.—Ed.

[2] By the Right Hon. Edwin Montagu. From a speech delivered before the House of Commons, August 15, 1916.

Ed. Note.—Mr. Montagu is director of the British Ministry of Munitions.

mortar bombs for wire cutting, and heavy howitzer shells for trench destruction. If this task is inadequately performed, if the wire checks the infantry, if machine-gun emplacements remain intact, the attack fails, and fails with horrible results. When the bombardment has disclosed to the enemy an impending attack, the enemy tries to stop it by curtain fire. During the bombardment the enemy, from his observation posts, is constantly watching for the infantry assault. He concentrates a converging fire from hundreds of long-range guns upon the trench area from which the infantry must debouch. That fire has got to be subdued, or the attack takes place under a perfect tornado of projectiles; hence the necessity for counter-battery work. An immense expenditure of shells from long-range guns, controlled from the air, whence alone the fire can be directed at the enemy's guns, goes on whenever aërial observation is possible. The guns are well entrenched, and this runs away with an enormous amount of heavy and medium ammunition. Next the attack takes place. Its flanks have got to be protected, and while the infantry is engaged in facing the parapet of the captured trenches the other way they have got to be protected from counterattack. A counterattack begins by the enemy's bombers coming down the communication trenches and bombing the captured trenches. They cannot be seen—cannot be spotted from the artillery observation posts. The only means of dealing with them is to direct a barrage fire which sweeps every communication trench, leaving nothing to chance. Later the enemy's more formidable counterattack comes along. It is organised under cover of concentrated artillery fire by means of massed infantry from the support trenches. The success of these attacks has not only got to be prevented, but the enemy must not be allowed to formulate them. So the successful infantry must be protected on its flanks and front by barrage fire of shrapnel and high explosives directed against the enemy's support trenches, where the infantry, unseen, are organizing for the counterattack.

Finally, to be able to press on successfully from one attack to the next, the resisting power of the enemy must be worn down by want of rest, of relief, of food. All day and all night the approaches to his trenches must be kept under fire to prevent relief coming to his men, to prevent the replenishment of ammunition supplies, and to prevent his obtaining food and rest. If you add one more detail, what I believe the French call *tire de démolition*, which is directed by the very heaviest howitzer guns against especially fortified nodes which

are dotted about the area of the German lines, and consider all the operations which I have described, wonder ceases that you want so much ammunition. The only marvel that remains is that you can ever produce enough to sustain the attack which goes on week after week, day and night, with varying, but always with sustained, intensity.

5. A MORNING'S WORK IN THE MINISTRY OF MUNITIONS[1]

I want to give the House a trivial illustration, if I may, of the variety of matters with which the Ministry deals. When I was told that I had to make a statement on the Munitions Department, I cast my thoughts back over the matters with which I had to deal on that particular day. I began with a friendly controversy with a government office about the transport from near the Arctic Circle to a neutral country of a mineral the name of which was unknown to me, but which I was assured was the limiting factor in the output of certain indispensable munitions. I went on to discuss the question as to whether we should press the India office, in the interests of the munitions supply, to construct a certain railway line in a remote part of India. There was a question of certain measures affecting the output of gold in South Africa. There was a discussion as to the allocation of a certain chemical, very limited in quantity, to meet the competing needs of the Army, the Navy, and the Air-Service. There was a deputation from an important educational institution asking to be allowed to continue certain building operations. There was a discussion about the men deported from the Clyde. There was a discussion on certain contracts in America valued at over 10,000,000 pounds sterling. In the course of the morning the Munitions Inventions Department brought to see me some walking specimens of exceedingly ingenious artificial legs. There was a conference on the allocation of highly skilled workmen of a particular class amongst competing firms. There was a discussion as to the quickest means of manufacturing gun carriages. There were a hundred and one topics which must confront any body of men who spend their whole days watching curves which ought to go up and figures which ought always to swell; reading reports from all parts of the world, and confronted

[1] By the Right Hon. Edwin Montagu (see p. 104). From a speech delivered before the House of Commons, August 15, 1916.

always with the cry: "More, more, more!" and "Better, better, better!"

IX. The Relation of Science and Industry to War

1. THE SCIENTIFIC BASIS OF WAR TECHNIQUE[1]

The chemists say this is the chemists' war, the engineers claim it as theirs, while a distinguished French physicist calls the struggle "a grandiose physical phenomenon," and the medical and surgical fraternity demonstrate that prevention from epidemics and rendering possible the return to the front some three-fourths or more of all invalided and wounded has made the continuance of trench warfare possible.

Verdun has been named "the metallurgical battle" and also "the battle of the trucks," referring in the first case to the importance of the iron-ore deposits of the Briey region located a few miles to the northeast, and in the second to the vast numbers of automobile trucks employed by the French on the only highway open at the outbreak of the battle.

The meteorologist is listened to with attention by the Great Headquarters, as was the astrologer of yore, before an extensive offensive is undertaken; and the geologist is consulted for information as to where to halt and dig in, where shelters may be safely built, and as to the probability of underground waters. Even the astronomer's services are considered of great importance, for example, in the preparation of new artillery tables and maps, the improvement and invention of instruments which differ but slightly in principle, however much they may differ in the nature of their use, from those with which he is familiar. Again, the statistician is a most valuable person when an offensive is being planned. Also France, at least, has found the mathematician indispensable, for in the person of M. Painlevé he sits at the head of them all as Minister of War, whose civil, technical staff is largely made up of eminent members of the same profession. Is this then a mathematicians' war?

[1] By George K. Burgess. Adapted from "Applications of Science to Warfare in France," *Scientific Monthly*, V, 289–97.

Ed. Note.—George K. Burgess (1874—) is a prominent physicist, now chief of the Division of Metallurgy in Washington. He is an author and translator of many metallurgical works.

In truth, chemistry, physics, hygiene, mathematics, engineering, geography and geodesy, metallurgy, geology, bacteriology, meteorology, or pretty much the whole curriculum of physical and natural sciences and their applications are each of them fundamentally essential in modern warfare, some of course more apparently so than others, but almost none could be spared and the war carried on successfully.

Two most important corollaries immediately suggest themselves:

First, the war can not be successfully prosecuted if there is lacking any of the necessary raw materials, including chemical, physical, and metallurgical supplies such as nitrates, optical glass, coal, and steel, to name but a few. The operations of modern warfare are so complex and interrelated that the want of crucial supplies in one domain may seriously hamper all; hence the phenomenon of which there are instances innumerable, of intensive scientific research in the development of substitutes as one or another essential material becomes scarce.

Second, modern warfare can be waged successfully only by the proper organization of these diverse scientific elements in addition to, and coordinated with, or incorporated in, the military establishments.

In a completely mobilized country, such as France, it is essential that each man in the community, which is nearly identical with the military establishment, be assigned to the task for which he is best fitted—or there must be scientific organization and management to secure the country's greatest possible efficiency.

What is this organization? How and to what extent are the sciences used in warfare? And how are the scientific men mobilized or otherwise made use of? A brief statement of some of the impressions gained during a three months' stay in England and France may not be without interest.

The most striking impression brought home is one of unity of purpose, perfect adaptation and coordination of the several branches; a harmonious whole, in fact, made up of separate and often highly intricate parts constituting an organization in which all the sciences and their applications blend into one, which is focused by the admirably trained technical and staff officers on the sole object of destroying the enemy. The French traits of individuality, initiative, and self-reliance, are, however, in no sense lessened or dulled by this cooperation.

What are some of the component parts of this unity in scientific warfare? We shall mention but a few in illustration of the whole.

Let us first consider examples of the applications of physics to warfare, some of which owe much of their efficacy to the relative immobility of the front.

Of all the branches of this science the one that had in recent years been lagging behind the others and to whose development the least attention was being paid, was acoustics; yet it is not an exaggeration to say that the application of the principles of acoustics, or sound, is of the greatest importance at the front.

One of the most highly developed is the location of enemy guns, concerning the details of which a volume could be written; suffice it to say that in the French armies there are several systems in use, all of which will locate to within a few yards an enemy battery at ten or twenty kilometers, indicate the caliber of the guns, differentiate between the sounds of discharge, flight through the air, and bursting, and record each and every separate shot; and the spot from which the shot was fired may, under certain conditions, be located before the shell bursts. There have been developed several ingenious listening devices built on entirely different acoustical principles for use in mine warfare, by means of which enemy mining operations may be exactly located. Again, for the location of sounds in the air, especially useful, for example, in locating airplanes at night, several new types of sound apparatus of extreme sensitiveness are in use. For submarine detection some of the most promising methods for further improvement are based on the use of still other sound-detecting devices. Wonderfully powerful megaphones for use in battle have also been developed. Acoustics as an active branch of physics has most decidedly come into its own.

In photography and the technique of photographic map making there have been great improvements, brought about directly by military necessity, especially in aërial photography, apparatus, and interpretation. One of our most interesting visits at the front was to the photographic headquarters of a French army corps, where we listened to an admirably delivered, illustrated lecture on the taking and interpretation of aërial photographs. The art of map making from photographs, as carried out at the front, is practically a new branch requiring great skill, and is evidently of the first importance, as oftentimes the success of an offensive is largely dependent upon the quality of this work.

As would be expected, there have been not a few advances made in applications of electricity, especially wireless apparatus and

methods, signalling and listening devices. There may be, for example, during a battle more than 1,500 separate wireless stations sending messages simultaneously; provision is successfully made for preventing interference and sorting out this great mass of signals so as to avoid confusion. Portable wireless outfits are supplied by the tens of thousands—requiring for the construction of these instruments alone a veritable army of skilled mechanics.

The reading public is perhaps more familiar with some of the applications of chemistry to warfare, such as the asphyxiating, tear-producing, and other noxious gases used in waves or clouds and lately more and more in shells; and the importance of nitric acid, toluol, and the like has been impressed on everyone. The stupendous scale on which such substances must be produced to keep up with the demands of the armies is perhaps not sufficiently realized, nor is there any adequate appreciation of the amount of scientific investigation being carried out. In France I understand there are some twenty-five distinct laboratories engaged in nitrogen-fixation research alone.

Turning now to meteorology, what has the weather man to do with war? He too plays a capital rôle. With his sounding balloons he keeps the troops informed as to when a gas attack may be expected and when it would be profitable to start one; the artillery depends on him for data to calculate important corrections, as for wind, humidity, pressure, and temperature and upper-air conditions in sighting their guns; the aviators as to prevailing winds, especially high up, and for general weather conditions; the balloon men keep in close touch with him, and even the transport service depends upon him for advance information as to muddy roads; headquarters relies upon him for knowledge of impending fog or rain and other changes—the weather man has a very heavy responsibility in helping to decide the most propitious moment for an attack on a grand scale, and if his forecast is erroneous, disaster may result.

An impressive sight on the French front was the firing of a battery of 320-mm. (13-inch) cannon, mounted on railway trucks, at an invisible target 19.5 kilometers distant. It took four shots to accomplish the end sought, which was demolishing an enemy battery that had been located the day before by "sound ranging" and photography.

What does such an operation mean in preparation and execution, viewed as a scientific experiment?

In the first place, it presupposes an exact knowledge of the region expressed in accurate maps, including of course territory in possession

of the enemy. The preparation of these maps is one of the most elaborate of the technical geographical services of the army; this service is usually supplemented when possible by triangulation from fixed observatories and photographic mapping from airplanes or balloons. It assumes further that the cannon of the battery have, as we might say, been calibrated, that is, the characteristics of their firing determined by shooting at a recognized and exactly located object of about the same range and making a known angle with the target. The relative positions of battery and target and their exact distance apart should also be known. A big gun is displaced somewhat with every shot fired and is brought back to position by reference to a fixed base by means of a series of optical measurements. Some of the allowances and corrections that have to be made in firing are: variations in weight of projectiles—showing the need of uniformity, homogeneity, and geometrical exactness in their manufacture—not a simple matter; weight, quality, age, and temperature of the firing charge—which gives but a hint as to a most elaborate series of researches in the physical chemistry of ballistics; the age, state of erosion, and temperature of the gun—another series of unsolved problems; the numerous atmospheric corrections, such as direction and force of the wind at the various levels of the trajectory; the temperature, pressure, and humidity of the air, all of which produce disturbances that vary with the distance of the target, or, what is the same, muzzle velocity of the shot as well as the shape of the shell.

There have been prepared elaborate tables containing these corrections and others which are constantly being improved by further research. The theory of probabilities is also made use of in an elaborate way for each caliber to control the inevitable dispersion of the shots after all known corrections are made. With all these data, how does the artillery officer know the accuracy of his fire at a target invisible to him and 20 kilometers away? If he has the local mastery of the air, use is made of airplanes which signal the location of each shot; otherwise he must depend on stationary balloons, special observatories, or even on his calculations alone if the weather be bad.

Finally, it is not necessary merely for the shot to strike the target; it must explode at the right instant and have a suitable "fragmentation"—here is opportunity for more research in mechanics, chemistry, and metallurgy. Such in brief is the mechanism of artillery fire, for the accomplishment of which many of the sciences collaborate, and

for the rendering it more exact there is still room for considerable research in astronomy, geodesy, metallurgy, chemistry, physics, and meteorology.

We have not touched upon the applications of science in the various branches of military engineering, some of which are new in this war, requiring the highest directing, technical talent, and thousands of workmen; the advances in medicine, sanitation, and surgery have not been treated, nor have we mentioned trench warfare with its manifold engines, appliances, and materials, necessitating the creation of new industries accompanied in all cases by elaborate scientific research. Gas warfare alone is based on what is literally a stupendous industry requiring the employment of chemists and other scientifically trained men on a great scale. Again there are large and very active laboratories maintained for the examination of enemy munitions and appliances of all kinds, and for the development of new and improved types.

Examples enough have been given to impress upon the reader, I hope, the tremendous magnitude, enormous scope, and far-reaching extent of the problem of modern warfare looked at from the point of view of the applications of science and the employment of scientific and technical men.

The wonderful organization was not all built up in a day, neither were mistakes avoided, nor could all the developments that have taken place been foreseen. In the early days of the war men were sent to the front, whose brains to-day would be an invaluable asset; national laboratories were almost depopulated; the military authorities were indifferent to advice from civilian specialists. To-day one would be embarrassed to decide whether an officer in one of the specialized services was an officer before the war or, let us say, a professor of chemistry. The national laboratories have been multiplied tenfold; and such care is now taken to protect productive brains that it may happen that the inventor of a new device is not allowed to go to the front to try it out.

2. THE UTILIZATION OF INDUSTRY[1]

We must ask the reader to take us quite literally when we state that the whole of the living forces of the country are absorbed in war.

[1] By Georges Blanchon. Adapted from *The New Warfare*, pp. 43–54. Translated by Fred Rothwell. Published by Thomas Y. Crowell Co.

Ed. Note.—Georges Blanchon is an eminent French authority on naval warfare and the development of the submarine.

Youths are recruited at the age of eighteen, and men up to forty-seven or forty-eight, in Austria perhaps even up to fifty. Within a few months a total of about thirty million Europeans were summoned to arms. This figure alone shows us that the expression "a nation in arms" is no longer an extravagant figure of speech—it is nothing but the strict truth.

This, however, is but a part of the forces employed in war, though indeed the part most in evidence. Formerly the army, with its military personnel, was almost self-sufficient; at the present time huge public departments have been militarized and organized for war purposes.

First, the railways—the initial concentration and mobilization of our troops alone have necessitated thousands of trains. They are needed for every advance, withdrawal, or lateral movement. The services in the rear—supplies, munitions, reinforcements, wounded men—keep the lines permanently busy not only at the front but right back to the very heart of the country. Consequently there is an entire staff attached to the army for purposes of transport by rail.

Analogous are the sanitary and medical services. Controlled by the army doctors, this department finds employment not only for a strictly military, but also for a semicivilian, personnel: a large and effective force, especially in auxiliary hospitals. Thus we have non-mobilized local surgeons, voluntary nurses and orderlies, Red Cross ladies, Boy Scouts, etc.

A third class is engaged in munition work. The public arsenals employ workmen who are sometimes under military rule and whose numbers are largely increased in war-time. Arsenals, however, are insufficient; in every belligerent country the widest appeal has been made to private industry. An article which appeared in the *Thurgauer Zeitung* at the end of 1914 stated that the number of Krupp's workmen at Essen had risen from forty-two thousand to sixty thousand since the opening of hostilities. Everything in the form of a machine workshop or a chemical works, or that could be transformed into either of these, has been either requisitioned or invited to take a share in the manufacture of munitions. All over the country are being made firearms, projectiles, trench-digging tools, barbed wire, motor-cars, aëroplanes, uniforms, tinned food for the army, etc.

Thus we find, along with those who are mobilized, great numbers of workers not only paid but frequently controlled by the war, indispensable to its success and devoted to the national task. Those

exempt from military claims, either by reason of age or of ill health, are invited, as also are foreigners, to collaborate voluntarily in the defence of the country. Nor do the public powers officially, and corporate bodies in their private capacity, fail to put the requisite pressure on shirkers.

England had to organize intensive recruiting of the "industrial army," with the help of the trade unions. In London hundreds of offices were opened in town halls and labour exchanges. Those who enrolled themselves undertook to work for a period of six months under the control of the government, wherever the latter might send them; and, if the conditions of engagement were broken, to recognize the jurisdiction of a special court. Moreover, another law ordered the preparation of a national register, so that all who were fit might be called on either to bear arms or to help in the production of war material.

Thus along with compulsory military service to the age of forty, which has now become law, compulsory industrial service is implied, potentially at all events, in the British organization.

Indeed a threatened nation may be compelled to requisition labour, for huge production becomes a public necessity. The question is perfectly simple and clear in the case of workmen already mobilized, who from the front have been sent back to their workshops. On resuming work at their trade they remain under military law; they do not cease to be soldiers; they are soldiers in a latent state, to adopt a medical term.

In fact, those who have technical experience in the various branches of activity indispensable to warfare—engineers, managers of works, foremen, specialists in some particular industry, private surgeons, radiographers, etc.—are now more usefully employed in carrying on their own work than on the battle-field.

Things do not stop here. However desirous we may be of preventing it, innumerable business transactions are bound to become more or less intimately concerned with warfare. Only by an intense flow of importation does the state maintain its stock of provisions and raw material. The majority of its orders are given private dealers, with whom it generally draws up long-period contracts. It is to the interest of the state to leave at their disposal the men they need to serve it.

Thus, in France, conscripted seamen engaged in commercial navigation have not been summoned back to the flag. Not content

with facilitating the recruiting of the personnel and actually supplying it in case of need, the state, by means of its navy, assures the protection of the mercantile fleet even outside home waters. After giving its orders and deciding upon freight and route, it dictates to the owners the safeguards to be adopted in order to avoid danger. In France and England alike it supplies ships with anti-submarine guns. It exercises all the more detailed and careful supervision over ship-building, because the merchant fleet is a most important instrument for the direct supply of national needs. Briefly, the fact that civil populations have to be supplied with food gives the mercantile marine an altogether special importance. As we see, maritime transport is very largely devoted to the public service; almost everywhere it bears the stamp of this in the status of its staff.

We shall be led to deal in a like manner with other industries, such as mining. The state, by assuming control of their productive effort, which conditions the operations of its armies, makes them, so to speak, an expansion of military activities.

Even now we see that German submarines no longer distinguish between war vessels and merchantmen; the destruction too of coal mines and manufactories is clearly an integral part of the new strategy, for which it becomes an end in itself. Everywhere attempts are made to destroy the crops or to raid the provisions of the invaded countries.

Thus the peaceful occupations of commerce and industry are voluntarily torn from the sphere of private interests, once respected in war, to be flung, as human life and property have been, into the devastating whirlwind.

Everything keeps alive a state of confusion; there is nothing strictly private nowadays. As both soldiers and civilians have to be fed and clothed, warmed and kept under cover, all sources of production, one after another, become national concerns. In order to carry on the struggle longer than the adversary, it is important to retain in their occupations a certain number of fishermen, cattle-breeders, farmers, and agricultural labourers, etc. Consequently the various tasks ought to be distinctly assigned beforehand, each man, in all essential trades, having his allotted part and his instructions, as in the mobilized army. On the day when one of the belligerents shall have thus completely organized the arrangement and disposition of its human resources, it will derive thereby such power of resistance that its rivals will be compelled either to imitate it or to lapse into a fatal inferiority.

3. THE MILITARY USE OF RAILWAYS[1]

It is now quite clear that future wars will be very different from those of the past. What we see at present warrants the conclusion that they will effect a profound transformation in the life of the nations. The social aspect of war is something quite new; its material aspect will be no less so.

In this new warfare means of transport have assumed a supremely important place. The first of these is the railway. A single train is capable of carrying an infantry battalion or a battery of field artillery; and to transport an army corps—thirty thousand combatants—fifty or a hundred trains are required, according as the fighting units only are taken or the entire convoy of departments in the rear accompanies them.

The entraining takes some hours—from two to three on an average. This, however, depends largely on the material to be loaded and the advantages offered by the station, such as platforms and various other contrivances. The same length of time is required for unloading. Military trains move at regulation speeds which do not vary: from twenty to twenty-eight miles an hour. They follow one another at regular intervals: a single track allows of the passage of a score of trains in each direction every twenty-four hours; a double track allows of fifty, sixty, one hundred, or even more, according to the sidings and the good working of the block system. On some days and over certain lines the total has reached two hundred and twenty. Thus we see that a double line might carry, on an average, an entire army corps per day. But there are many things to take into consideration, especially junction lines, and it is manifestly of the highest importance to have large numbers of parallel tracks.[2] In this respect the French "Nord" system and the German frontier systems offer facilities which cannot be found on the Russian railways, for instance.

At first the entire mobilization and concentration was effected by means of the railways: In France we required four thousand seven hundred and fifty trains. Everything was carried through with the utmost order. The army still has a permanent need of railways for two purposes: its communications with the rear and its movements from place to place. The former are fairly regular, the latter essen-

[1] By Georges Blanchon (see p. 112). Adapted from *The New Warfare*, pp. 102–112. Translated by Fred Rothwell. Published by Thomas Y. Crowell Co.

[2] See selection XIII, 4, for a description of Germany's strategic railways.

tially irregular; but since sudden necessities must be met without delay, a considerable stock of material is kept always ready, and thus mobilized.

For the supply of one army corps alone, it was calculated, before war broke out, that train loads aggregating one hundred and twenty tons per day would be needed; experience has shown that as the stationary condition of the fronts causes the immediate exhaustion of all local resources, this figure must be raised to two hundred tons.

It was Napoleon who said, "The strength of an army, like momentum in mechanics, is the product of the mass and the velocity." Now the railway is a means of communicating great velocity to great masses. In a single day a train can travel to a distance of six hundred kilometres; on foot, we cannot go more than thirty.

Enemy-surrounded countries have the advantage of interior lines which enable them to transfer in succession almost the whole of their forces against each of the army groups threatening them. This was the great art of Napoleon. Railways facilitate these changes of position. Frequently too they supply means of warding off attacks, since they offer considerable opportunities for movements along exterior lines. For instance, it is possible to make the circuit of such a country as Poland in a very few days, and so to counterbalance the efforts of hostile reinforcements which have crossed it as the crow flies.

The gain in time obtained by using interior lines is only the excess of the one journey over the other. This gain in time manifestly decreases as transport becomes more rapid. But to obtain the same results as in the past, it would need to be greater, because battles last longer nowadays. An army was formerly put out of action in a few days—it had no time to obtain assistance; to-day weeks are required.

In this respect, the march of progress restricts the advantages of interior lines, as well as the importance of most strategic artifices and probably also the predominant rôle played by the great military leaders. It makes more certain the consequences of an all-round superiority of moral and material forces. Victory is more the reward of a people, less the success of one man.

The preparation of railways for war uses is not confined to the planning of the system itself. It extends to the provision and adaptation of stations, to the duplication of the lines, to the defence of bridges and other structures, to the provision of rolling-stock. Considerable extension may be looked for in all these directions. However important the motor-car and the aëroplane may be in military

transport, it is probable that the railways will always be the most satisfactory means of conveying heavy material.

The railway carriage itself can be adapted for military uses. We have tank cars, cold-storage cars, hospital trains; above all, we have armoured trains and truck gun-carriages.

Railways will perhaps render more effective service than ever in the matter of bringing to the required spot huge guns too heavy to be transported in any other way. These will be fired without leaving the rails. The truck gun-carriage is so arranged as to withstand the recoil; this result is obtained by placing on the ground, once the carriage is stationary, supports which take the load off the wheels. The recoil is transferred to the ground, so that the rails do not suffer.

Whether the object is to organize a supply line, to transfer reinforcements, or to carry heavy material to its destination, it may be of service to provide for the absence of normal lines by laying down rails along the road. Both the Germans and ourselves have done this very frequently. A narrow gauge of sixty centimetres is generally used. A team of skilled sappers takes about three hours to lay down about one kilometre of railway.

All great armies have in reserve stocks of rails, along with their sleepers. It may be possible to carry preparations further by permanently fitting up along the roads themselves whatever would not interfere with their normal use, and more particularly by laying tracks on the footpath on one side of the road, and simply overlaying them with a footboard. This system might be applied even to broad-gauge lines. Stores of material might be kept at various distances along the line and the necessary sidings be provided. A great number of auxiliary lines thus fitted out in the rear of an army would prove extremely useful.

4. INDUSTRIAL ENERGY AS A MILITARY WEAPON[1]

Why has Germany, with only the aid of her feeble Austrian ally, been able so far to withstand the rest of Europe? It is because she is twenty years ahead of the average of her opponents in industrial energy and the use of machinery. Suppose, for the sake of illustration, that the states of the Union should once more engage in civil war, and

[1] By James R. Finlay. Adapted from an address before the Mining and Metallurgical Society of America. Printed in its *Bulletin No. 86*.

James R. Finlay (1869—) is a prominent mining engineer and has written extensively on mining problems.

that Illinois, Indiana, Michigan, Ohio, Pennsylvania, New York, Connecticut, and New Jersey should form a combination to resist the rest. Suppose for full measure we throw in Mexico and South America as opponents of this bit of territory. We would then have a population of 40,000,000 in a territory of 285,000 square miles fighting a population of 150,000,000 occupying a territory of 15,000,000 square miles. Which would be likely to win? I may be foolish, but it seems to me that the group of states between New York and Chicago would probably win decisively. Why? Because in that area, producing 75 per cent of the coal and making 87 per cent of the iron of the country, there is almost a monopoly of the organized manufacturing and engineering energy of the Western Hemisphere. The area contains practically all the plants capable of manufacturing arms, munitions, and special devices. In this territory we have not only the plants but the trained population, the trained leaders and organizers. If we permit ourselves to imagine that this group of states was organized under one efficient corporation which had the control of every citizen for the purpose of carrying on war, we should have in America something like the situation in Germany today. We could well reject the idea that the New Yorker or the Pennsylvanian was in the least superior to the Canadian or the Texan, but that would not alter the fact that the superiority of our group of states in the production of munitions, the transportation of supplies, the organization of effective effort, and its ability to strike quickly would be very great indeed. If this group of states should make as its first move the occupation of West Virginia and of Missouri, it would add to its preponderance much as the Germans have added to theirs by the occupation of Belgium and Poland.

The idea is abroad that Germany may be conquered by the Allies if the latter will buy enough copper and other munitions. The reality is that buying of supplies is a comparatively insignificant part of the problem. To take an industrial comparison, let us suppose that the plants of the United States Steel Corporation were supplied, complete, to Russia, without the organization as it exists to day. What use could Russia make of them?

I do not mean to imply that the individual Russian is necessarily inferior as a workman, or as a man, to the individual American. That is one of the difficulties in understanding this present situation. Each of the great nations and races of mankind is able to furnish human material that can compete on even terms with that of any other

nation. But I think you will recognize quickly that it would take the Russians many years to make any adequate use of the plants of the United States Steel Corporation.

It is hardly worth while to go into details. The operation of those plants, including mines, steamships, railroads, rolling mills, and factories of all kinds, requires the development of a deal more than that, namely, a slowly evolved and highly organized control. The plans and the execution of them must be tested by competition with rivals. The organization must know the fields in which the products, when made, can be sold and utilized.

It would be easy to dwell on this subject a long time, but I think you will soon conclude that the plants of the United States Steel Corporation would never reach anything like the effectiveness in Russia which they have in this country, until the Russian nation is developed industrially to such an extent that it can meet such an organization on even terms. In other words, other industries—all of the industries in the country, in fact—would have to be developed in a substantially equivalent manner. This certainly can not be accomplished overnight, nor during the probable continuance of any war. It is a matter that requires nothing short of the industrial organization and development of the nation. A generation, or even two generations, is a short time for such an accomplishment.

It is a fact not generally recognized that today there are only three nations in which mechanical industry is widespread, namely, the United States, the British Empire, and Germany. It is not fair of course to say that industry has not been developed in other countries, but these nations are so far ahead of any rivals that they are very distinctly in a class by themselves. These three nations produce about 90 per cent of the coal of the world and undoubtedly operate 90 per cent of its machinery.

It happens that one of these nations is the most highly developed military nation in the world. The other two, while developed industrially quite as highly as Germany industrially, happen to be about the least military nations of the world.

X. The Larger Economic Strategy[1]

The larger strategy of war calls for the solution of complicated and baffling problems in industrial organization and involves the thought and efforts of all the people of the warring nation. Single

[1] An editorial.

military campaigns may aim at the taking of supplies, the capture of men, or the occupation of territory. But these immediate objects are part of a larger purpose, of a destruction of the armed resistance of the enemy, and in terms of this event their success or failure is to be judged. To this end it is necessary that eventually, as campaign follows campaign, an army sufficient in numbers, equipped with an adequate amount of devices, and supplied with the requisite volume of materials be hurled upon the opposition. Antecedent to the strictly military problem this larger strategy involves the two problems of securing the requisite men and materials and of distributing and utilizing them in complementary branches of service.

It is evident that the first of these problems depends upon the nature and intensity of the struggle. If the enemy is vastly inferior in man power and in economic resources, or if serious deficiencies in industrial organization make it impossible for it effectively to bring its strength into play, the strategy of supply involves no difficulties. If, for example, the United States were seriously bent upon the conquest of Mexico, an army large enough for the purpose and an adequate supply of materials might be obtained with little difficulty. An army might easily and quickly be recruited by calling for volunteers who could leave their positions or their leisure with little difficulty. The material might be obtained simply by taking up the slack in the industrial system, which is not running at full speed. But if the enemy is strong in men and resources, well organized, and willing to pay the necessary price for military success, the problem is greatly changed. It is suicide to meet an enemy with a million men with an army of only half a million. Gas shells by the tens of thousands are not a match for gas shells by the hundreds of thousands, and rifles are ineffective against machine guns. Furthermore, if the opponents be evenly matched, the struggle becomes a competitive one. A surplus of men and machines gives one side an advantage for attack, and every effort is made to secure it. But this calls for similar exertion by the other. It is the competitor who is willing to plunge most heavily who determines the plane of competition. If the enemy's effective forces are not matched, the victory is lost. They must be overmatched if effective victory is to be won.

In view of this really cut-throat competition, the securing of a surplus of men, machines, and materials becomes alike of the greatest importance and of the gravest difficulty. However simply it may be stated, it involves great precision in estimating the strength of the

enemy and in anticipating the course of events, nice calculations and careful judgments about the use in a complementary way of many groups of men and a bewildering variety of industrial equipment. It involves a reconciliation between three sets of interests. First, men and means must be left at their appointed tasks to turn out food, clothing, and other necessities sufficient to insure health and productive efficiency to the population. Secondly, a force must be sent to the front sufficient to prove effective there. And thirdly, men and materials must be kept back of the line adequate to produce the large and varied supplies which the army requires. Too many men and materials in the first or third of these groups is at the expense of the second. Too few rob the second of a part of their fighting efficiency. In short, the problem is to make the fighting force, which is the cutting edge of the industrial machine, as large and as efficient as is necessary, without weakening the supply service enough to decrease its efficiency. It is evident that the problem requires the utmost delicacy to be manifested in a series of careful judgments. To cite examples of its importance, examples now quite familiar, England suffered during the earlier years of the war from not having men and materials enough at the front, and one of the causes which led to the disorganization of the Russian industrial structure, so evident after the revolution, was the withdrawal of too many men from the economic system for use in the armies.

Under most favorable conditions the solution of the problem is attended with difficulty. In democratic nations like Great Britain, France, and the United States the difficulties are particularly baffling. One problem is in adjusting to the unified demands of war an industrial system which has been contrived with no such end in view. Laborers are specialized to particular tasks, capital has been stereotyped into buildings and equipment which know not war, trade has cut deep and peaceful grooves for itself, and personal habits have become unwarlike and rigid. Although the nation may be willing, it is hard for rational thought to displace the habits and conventions of generations, and for the newer rationalized thought to create a belligerent industrial system in its own likeness. A kindred obstacle lies in the great difficulty of securing the surplus for war use in a society as intricate and complicated as ours. One runs the risk of failing to secure a surplus large enough to put an adequate army at the front and yet of imposing upon certain groups of society burdens heavier than they can bear and still retain their efficiency. In short, there may be much

waste which might be converted into necessary war materials. From this it is evident that the problem of securing the surplus is a strategic one which ramifies throughout the industrial system and in its solution calls for the co-operation of all the people of the country.

At this point an illustration may serve to point the nature of this problem of strategy. It is now a commonplace that the army which has the offensive is at an advantage, and that superior numbers of men and materials give the chance for the offensive. Each of the warring nations has been trying to get to the front as many men as possible. To do this all of them have utilized the services of children, the aged, the infirm, and the leisured in industry. Above all, they have attempted to draw women into industrial occupations to release men for the front. In this connection it may be remarked that at present American women are just beginning to awaken to their part in the strategy of the war surplus. For months they used a large supply of labor in turning out a very small product by knitting for the Red Cross. Of course this little was better than nothing. But it cannot be remarked too often that a nation which uses the machine system exclusively possesses an enormous advantage over one which employs in considerable measure the technique of handicraft.

But the problem of securing an economic surplus large enough to be effective leads to a second strategical problem of an economic nature. The men and materials freed from the industrial tasks of peace times are a fluid mass. The men have to be separated into groups, such as infantry, aëroplane, munitions, etc., and these have to be specialized for tasks which in the great art of war are complementary. And each of these larger groups has to be divided into a myriad of subgroups. Likewise the materials have to be specialized to particular services. This separation has to be carefully made and the correlation carefully effected in view of a larger program of military operations. It is manifest that this separation and correlation is a problem in the organization of men and materials.

Complementary to this and conditioning it is the third problem of the larger strategy, that of hurling it most efficiently upon the enemy so as to secure the disorganization of armed resistance. This resolves itself into the kindred problems of concentration. The object is to concentrate one's effective strength and to cause the enemy to dissipate his, or, more properly, to fall upon an enemy who has been forced to dissipate his forces with a military establishment organized against his weakest point. Such a problem involves conserving the economic

resources of men and materials and causing the enemy to waste as many men and as much of his limited materials as possible. To cite an example, the object, or at least one of the objects, of the Gallipoli campaign, was to cause a "diversion" of the resources of the Central Empires from the Eastern and Western fronts. Italy's entrance into the war was premised upon no expectation of being able immediately to break the strength of Austria by crossing the Alps, but to weaken the German lines on the Western front. And, in a way, the dissipation of the resources of the Central Powers and their inability to strike a conclusive blow was the chief result of Russia's participation in the war. How the costs of these ventures compare with the results is a question which does not now concern us. The point is that the object is to cause the enemy to use as many men and materials as possible by the expenditure of a minimum of energy on the part of the aggressor.

Perhaps the clearest example of an attempt to force a great waste of men and resources upon the enemy with little expenditure is the use of the submarine by Germany. The casual reader, who has no interest in the larger problems of strategy, has been taught by the newspapers that the success of the submarine is to be measured by its ability to bring the Allies to their knees by disorganizing their communications and forcing starvation upon the people of England. Those responsible for submarine activity doubtless had some thought of such a happy outcome and would not be seriously disappointed in such an event. But its success or failure is not to be appraised by so obvious a method as its ability or disability to bring England to terms. Its destruction of ships has added to the cost of carriage of cargoes the cost of the ships destroyed as well as the cost of the cargoes which have gone to the bottom. One can see also that if the average ship makes twenty, or even forty or fifty, trips before it goes to the bottom, the cost of carriage, which is in the last analysis nothing else but labor and economic resources, has been multiplied many fold because of submarine dangers. But to this must be added the labor of men and materials embodied in convoys, destroyers, mine-sweepers, aëroplane observation, and the development and manufacture of the thousand and one devices which are used in submarine chasing. In addition, the scarcity of ships interposes an obstacle between the manufacture of munitions in America and their use three thousand miles away. The small neck of the bottle interferes in ways too subtle and too numerous to be mentioned here with

the production of supplies in the proportions to each other which those responsible for the military program deems necessary. What these costs in the aggregate are, and what the items would be as an overhead charge for the protection of shipping in any larger scheme of national accountancy, is not definitely known and it would be idle to try to compute it from the meager evidence at hand. But it is apparent to any candid mind which wishes to face the facts, that the men and materials required to meet the submarine menace are only a fraction of those required to maintain it. In short, by the use of a certain amount of limited resources Germany is able to force upon her enemies the expenditure of many times that amount of resources.

Together, these problems—the organization of men and materials between necessary civilian production, war supplies, and the operations of the front, the apportionment of men and materials between various military and semi-military demands, and the problem of concentration of resources against an enemy dissipating his, constitute the larger problem of strategy. Aspects of this problem are necessarily antecedent to the military problem; others are complementary to it; but all are intimately associated with it, and the problem of purely military strategy can be solved only in terms of, and in the light of, the solution of the larger problem of the economic strategy of war.[1]

[1] An article by Lieutenant-Colonel Charles á Court Repington in the *Atlantic Monthly* for August, 1918, makes many pertinent suggestions as to the relation of economics to military and political strategy. It is an answer, largely in economic terms, to the contentions of M. Chèradame and others of the "Eastern school" of strategists.

IV

RESOURCES OF THE BELLIGERENTS

Introduction

A consideration of the question of the larger economic strategy of war, which it was the purpose of the last chapter to raise, may properly begin with an enumeration and comparison of the resources of the various belligerent countries. These are the physical funds out of which armies must be supplied with the vast array of equipment and munitions which constitute the sinews of modern war. The aggregate of these, too, is the maximum which limits the size of armament and the effective participation of a nation in war.

The first economic asset or liability mentioned below is that of geographical position. Perhaps in its strictest sense geography is to be excluded from the list of economic factors in war. But indirectly it is of great economic importance because of its influence upon the effective utilization of material resources. The matter of favorable geographical position permits the effective manipulation of men and supplies with little waste. Proximity to the battle front means that little of the limited resources of a nation are used in getting forces and materials there, and most of them can be hurled directly upon the enemy. On the contrary, distance means alike a drain and the waste incident to a more complex organization back of the lines. It means that a large part of the nation's productive energy is used up in getting to the scene of action and that there is less to expend when troops and supplies are there. In these and like ways geography is of importance in its influence upon the organization of men and materials.

The next economic factor (asset or liability, according as it is plentiful or scarce) is that of "industrial resources." More broadly these include man power, technique, organization, etc. More narrowly the term is limited to the raw materials out of which are made the goods which the modern art of war requires. In particular it includes coal, iron, steel, petroleum, cotton, lumber, and other staple commodities. The technique of modern war, with its dependence upon the machine process, requires in the largest quantities materials

of which these are the raw elements. An enumeration and comparison of these is therefore of value in determining in relative terms the economic strength of the several belligerents.

But this reckoning is not sufficient. It indicates a tremendous advantage of the allied nations over the central empires, an advantage which the course of the war has not made explicit. It remains to add that these resources indicate only the limit of possible strength, not the extent of effective participation. To be used they have to be converted into the actual materials of war. This process is dependent upon technique, industrial organization, a singleness of aim in governmental control, national ideals, and the habits and customs of the people. Largely because of its late adoption of the machine technique by a government which subordinated the new industrial system to military ends, Germany was able to utilize more effectively its resources than were the Allies. In addition a scheme of individualism, written into the institutions and habits of allied people, has seriously interfered with the effective utilization for war of the productive resources.

XI. The Value of Geographic Position

1. ASSETS AND LIABILITIES OF THE GERMANIC[1] POSITION

I. RELATIVE AREAS OF THE BELLIGERENTS

In attempting to appraise the significance of geography in relation to the military power of the belligerents, it will be of interest to note first the relative areas of the contending powers. At the outbreak of the war the alignment of nations was Germany, Austria, and Turkey against Great Britain, France, Belgium, and Russia. Exclusive of Asiatic Turkey, Asiatic Russia, and colonies, the area of the Central Powers was 461,203 square miles, and of the Entente 2,337,370 square miles. In the year 1917 and the first half of 1918 (before America's power could manifest itself) the geographic areas involved were as follows: the Central Powers, including at this time Bulgaria, Servia, Roumania, Belgium, and Poland, 634,249 square miles (this is exclusive of the Ukraine and the North Baltic Russian provinces). The area of the allied nations at this time (that is, the British Isles, France, Italy, and Portugal) was 474,827 square miles. In this alignment we are considering Russia as out of it, Japan as (practically) neutral, and the United States as not yet effectively in. We are also excluding the

[1] An editorial.

British and French colonial possessions because their great distance and sparse population render a direct comparison of little value. As an offset at this time against these colonial areas may be set down Asiatic Turkey, 699,342 square miles, a considerable area of France in the possession of Germany, and a relatively free hand for Germany in a large portion of Russia. It need only be added that with the United States involved the allied area is again in the ascendancy.

II. DISADVANTAGES OF THE GERMANIC POSITION

The chief disadvantage of the Teutonic position, as has often been pointed out, lies in the necessity, imposed by its central Continental location, of fighting on both fronts—that is to say, this was a disadvantage so long as Russia was a serious contender. In the early days of the war it was necessary for the Germans and Austrians to plan and carry out two separate campaigns, and to co-ordinate them as well as might be under the conditions imposed by geographic factors. Should they strike France first with the hope of reaching Paris before the vast hordes of Russia could be effectively mobilized? Should they strike both east and west simultaneously? Should they endeavor first to crush Russia's military power and then turn their entire strength upon France and take Paris at their leisure? The world of course knows that the first of these two alternatives was chosen. Everyone knows, also, that after failing to put the French out of the conflict, the second alternative was resorted to. And everyone knows that they eventually succeeded in breaking Russia. The delays involved, however, must be set down as due not so much to faulty strategy as to the inherent difficulties in waging war simultaneously on the two fronts, which became a necessity because of the unexpectedly strong resistance on the west and the unexpectedly rapid mobilization of Russia's forces in the east.

The second disadvantage of the position of the Central Powers lies in their being partially subject to blockade. It should be borne in mind in considering this disadvantage that in the early months of the war all the Roumanian frontier was open, as well as the Adriatic Sea from the Italian border as far as Cataro. Likewise the Swiss and Italian frontiers were open for trading purposes. In addition to all this, by virtue of Germany's control of the Baltic and the neutrality of the Scandinavian countries and Holland, the gates were at least partly open to trade with the whole Western world. Great Britain's control of the sea was, nevertheless, a powerful factor, and Germany

was undoubtedly seriously embarrassed in obtaining all the materials required. It is equally true, however, that in the early months and even years of the war the Allies were seriously embarrassed in their relations with neutral countries in endeavoring to prevent cargoes sent to such neutral countries from being transshipped to Germany. While the British fleet could search vessels the cargoes of which might reach the Central Powers through Gibraltar, the Straits of Dover, or the North Sea, it could not directly prevent supplies reaching Germany through Switzerland, Holland, Denmark, Roumania, Norway, and Sweden. The Allies did not dare seriously to offend European neutrals for fear that they might be drawn into the conflict on the side of Germany, and they were particularly anxious to retain the good-will of the United States, from which they received large supplies and on which they counted eventually for direct military assistance. It should be borne in mind in connection with the trade of the European neutrals that although supplies obviously designed for German use might be seized as contraband, it was impossible to prevent Germany from buying the same material after it was "made up" by the neutrals.[1] During the first two years of the war, the imports from all the neutral countries bordering on Germany, particularly those from the United States, increased tremendously, in many instances representing increases of 400 or 500 per cent. That these goods were transshipped to Germany, either in raw or finished form, goes without saying.

It is apparent from the foregoing that the Allies' blockade of Germany in the early stages of the war was relatively ineffective. Indeed it is a question whether the energy expended by the Allies during the first months of the war in endeavoring to prevent importations to Germany was worth the effort—save as a necessary preliminary to more effective control in the later stages of the war. It has been suggested that the partial blockade that was effected, particularly in relation to imports of materials used in the manufacture of luxuries, proved a boomerang to the Allies. Mr. A. C. Miller, of the Federal Reserve Board, states:

> It is coming to be recognized by those who appreciate that this war is an economic endurance contest that England's blockade of Germany has been one of Germany's greatest aids in her financing of the war. It has forced the most rigid sort of economy and through bringing the whole

[1] It was not until the spring of 1918 that the United States was able to reach a satisfactory commercial agreement with Norway.

people appreciably nearer the point of starvation has led them to accept the most drastic control of living that the world has ever seen. I have been told upon trustworthy authority that when the policy of submarine warfare against England was under discussion in Berlin, one of Germany's most eminent strategists argued vigorously against it on the ground, not of its violation of the established rules of international practice, but on the ground that it would help England more than it would hurt her. "Keep the submarine away from England's shores and England will eat herself into bankruptcy quicker than the submarine can bring her to starvation."[1]

While other measures of enforcing the economies required by war have been discovered which have rendered this prophecy false, it is undoubtedly true that the curtailment of raw materials required by Germany in the manufacture of luxuries was a great aid to the rapid readjustments of industry in Germany to a war basis.

In the later stages of the war the blockade of Germany has been more effective, but with the collapse of Russia and the resulting enormous gains of Germany in the east and the southeast this geographic disadvantage is again somewhat minimized.

The third disadvantage that has been pointed out in connection with the geographic position of the Central Powers relates more directly to the military organization. The German armies before the collapse of Russia held four corners of a rectangular sort of area: Belgium in the northwest, Alsace-Lorraine in the southwest, East Prussia in the northeast, and Silesia in the southeast. A fifth might be added—the Italian front. The breakdown of Russia has of course eliminated one of these corners. If Germany is forced on the defensive she must face the following dilemma: Shall one or more of the regions be sacrificed, or shall there be a dispersion of forces in an attempt to hold all corners at once with a possible resulting loss on every side? The areas separating these fronts are considerable, and in spite of Germany's strategic railways it remains a serious handicap when once her enemies are gaining the upper hand. The recent allied victories in quick succession in Italy, Albania, and in the Soissons-Château-Thierry-Rheims salient offer concrete evidence of this geographic handicap.

III. ADVANTAGES OF THE GERMANIC POSITION

The Central Powers have possessed, however, one tremendous geographic advantage. This is contiguity of territory and closely

[1] In an address before the Western Economic Society and the City Club of hicago, June 22, 1917.

connected means of communication. The distance from Berlin to Vienna is a brief night's journey by express train, so that the war strategists are in almost physical touch with one another. Moreover, the lines of communication throughout the Central Empires, both north and south and east and west, are so well developed that it is possible to transfer troops from one front to another with a minimum loss of time. It is not to be understood from this statement that the handicap suggested in the previous paragraph is after all an advantage. The foregoing discussion relates to the situation in which Germany would find herself when strongly pressed by the enemy on every sector at once. So long as the German armies are in the ascendancy, at least on some of the important fronts, this compact geographical area with through lines for rapid communication is a real advantage. For instance, it was possible for the Germans to transfer troops from Russia to the Italian front for the Italian drive in the autumn of 1917 within a very few days by virtue of almost direct trunk line connections.

2. ASSETS AND LIABILITIES OF THE ALLIED POSITION[1]

I. ADVANTAGES

The outstanding advantage in the geographic position of the Allies is the location of France and England on the Atlantic and Italy on the Mediterranean. This position, coupled with the great merchant fleets and navies of the Allies, eventually made possible a serious embarrassment of Germany through a curtailment of importations of basic raw materials. Although this blockade has not succeeded in bringing Germany to her knees, it must still be borne in mind that it has necessitated heroic measures on the part of the Central Powers to make themselves economically self-sufficient—measures which have resulted, in many instances, in devoting their energies to productive operations for which they are very poorly adapted. The Allies, on the other hand, having control of the seas, have been able to draw the materials needed from the regions of the earth which can produce them most advantageously, paying for them meanwhile with commodities produced by themselves under favorable productive conditions. Better still, they have not always had to pay for them, but have borrowed tremendous quantities of materials and supplies to be paid for after the war is over. Germany, on the other hand, has since the first year or so of the war been required largely to produce

[1] An editorial.

her own supplies within her own borders. Credit with outside nations, owing partly to geographical factors, has been more and more a negligible part of the German war program. On the other hand, the allied nations from the very beginning were assured of large imports of supplies. It was unnecessary in consequence to effect so complete a diversion of energy with resulting loss in productive efficiency as was the case in the Central Powers. This was the situation, however, only so long as there was an important neutral world remaining. With the United States an active participant in the conflict, the Allies as a whole have found it necessary to devote their energies, as largely as possible to the production of war supplies. It still remains possible, however, by virtue of England's control of the seas, to maintain an extensive interallied division of labor with resulting productive economies.

Another geographic advantage possessed by England arises from the fact that her island position, protected by a great navy, renders her great resources of iron and coal immune from seizure by the enemy. So long as England is free from invasion and so long as man-power and woman-power remain for the working of her great manufactures of iron and steel, England cannot be forced out of the war for want of the munitions that are indispensable for modern warfare. As we shall later see, France is in an entirely different position in this respect.

II. DISADVANTAGES

In the first stage of the war the most outstanding disadvantage of the allied position was the geographic isolation of Russia. The Central Powers as a united organization had to meet France on the one front and Russia on the other—disunited and uncorrelated allied armies. Physical unification of armies was of course impossible, and the communication of intelligence between the Russian and French commands was slow and uncertain. One might almost say that it was non-existent in comparison with the personal and continuous contact possessed by the German and Austrian general staffs. As a result of the geographic position of Russia it was impossible for either side quickly to rearrange its plan of campaign as a result of changes in their respective positions. Another geographic handicap of the Allies, as relating to Russia, is that the only Russian outlets to the sea were via: (1) the Arctic port of Archangel, which is open little more than half the year and separated from the scene of military operations by hundreds of miles of waste and deserted country, with only one

narrow-gauge line of railroad with inadequate rolling stock to bridge this territorial gap; and (2) Vladivostok on the Pacific, connected with the scene of operations in the west by a single line of railway six thousand miles long.

France possessed two marked geographic handicaps. The first is that of an open frontier toward Germany. There are no geographic barriers to prevent an open attack from the east, and in consequence France had been compelled to fortify the entire frontier facing Germany with a line of forts extending from Verdun to Belfort. For 200 miles to the north of this, however, that is, from Verdun to the North Sea, there was virtually undefended territory—undefended by either geographic barrier or military forts, except for the Belgian fortresses.

The second great geographic handicap of France lies in the fact that her deposits of coal and iron are near the German frontier. Germany's prompt advance into French territory thus struck France a vital blow, for without resources of coal and iron no nation can wage effective modern warfare. So long as France could rely upon accumulated stores, the German occupation of the French industrial region was of small account. But as soon as the war entered upon its second stage, where the munitions for the armies had to be supplied from day to day through new production, this became the most serious factor in the French situation. It necessitated the importation, at enormous cost, of great quantities of munitions and it required also, the development at great expense of new industrial regions in France, noticeably in the southeast.[1]

England's first handicap lies in her island position. From one point of view, as we have seen, this is an advantage, for it necessitated the development of a great navy and merchant marine with the control of the trade routes of the world. But from another point of view this is a serious disadvantage. Her long-established insular security had resulted in a policy that made it possible for her to supply an expeditionary army at the beginning of the war equivalent only to about one-thirtieth of the allied forces. In addition, England's control of the trade routes of the world, coupled with her great navy, required the utilization of a relatively large portion of her man-power. It is a question indeed whether the diversion of man-power from direct participation in the war occasioned by England's insular position

[1] Cf. selection XVIII, 1.

does not substantially offset the advantages which England is regarded as possessing as a result of her control of shipping.[1]

Another geographic handicap of England consists in her scattered interests. England has had to maintain a home guard, forces in France, Saloniki, Egypt, and Mesopotamia. To occupy these outlying regions has doubtless cost England more in dissipation of forces than she has been able to gain from the assistance rendered by her colonies. It is significant to note in this connection that England's maximum force in France has been estimated at not more than two million men.

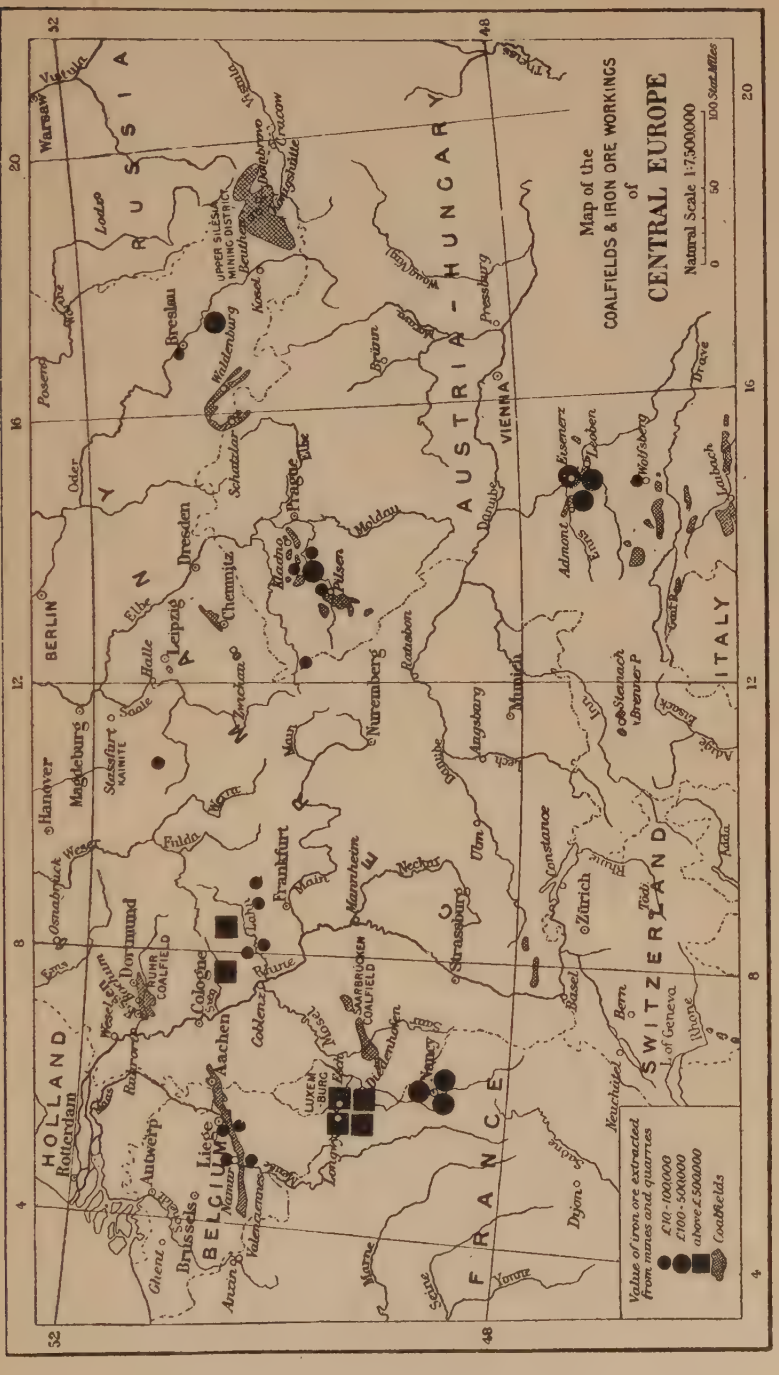
The outstanding geographic disadvantage of the United States is of course her cis-Atlantic location. This is a disadvantage from two points of view. First, the rank and file of the people of this country have never been able to grasp the real nature of the struggle from the mere fact that it is three thousand miles away. This statement applies not merely to the period of our neutrality but it has been true until at least very recent weeks. Nearness to the awful carnage appears to be indispensable to a genuine appreciation of its grim requirements.

Second, the geographic position of the United States renders our entire task of industrial and military mobilization dependent upon shipping. The great army which we are sending and the vast stores of supplies and munitions must all pass through a narrow-necked bottle, as it were, before they can be hurled at the enemy. When this is contrasted with the strategic railway net possessed by Germany, leading to frontiers which are at best distant but a short day's journey, our handicap is seen to be almost incalculable.

[1] See in this connection selection X, p. 123.

XII. The Industrial Resources of the Belligerents

1. LOCATION OF EUROPEAN ORE AND COAL DEPOSITS



2. RESOURCES AND PRODUCTION OF BASIC RAW MATERIALS

COAL PRODUCTION IN 1913 IN TONS OF 2,000 POUNDS

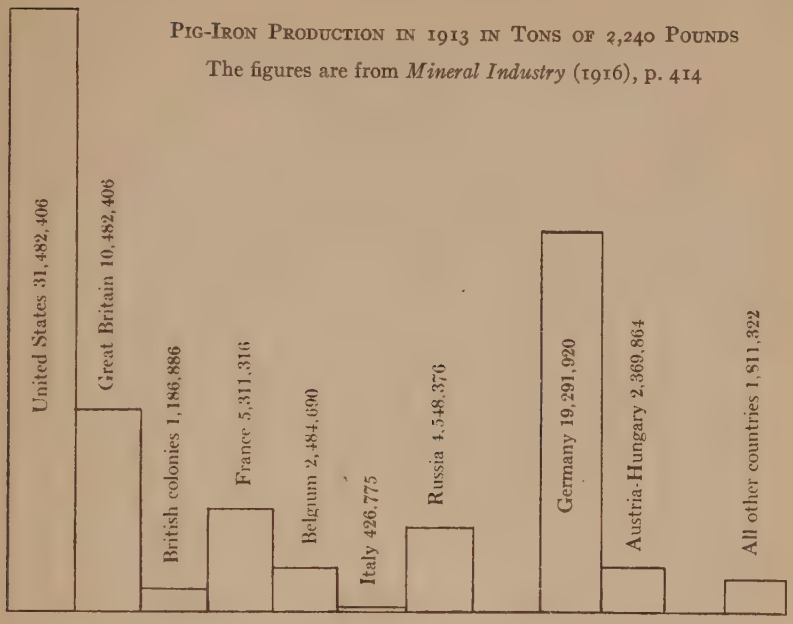
The figures are from *Mineral Industry* (1915), p. 118

COAL RESOURCES IN 1913 IN METRIC TONS

The figures are from "Coal Resources of the World," *International Geological Congress*, XII (1913), xx–xxvii

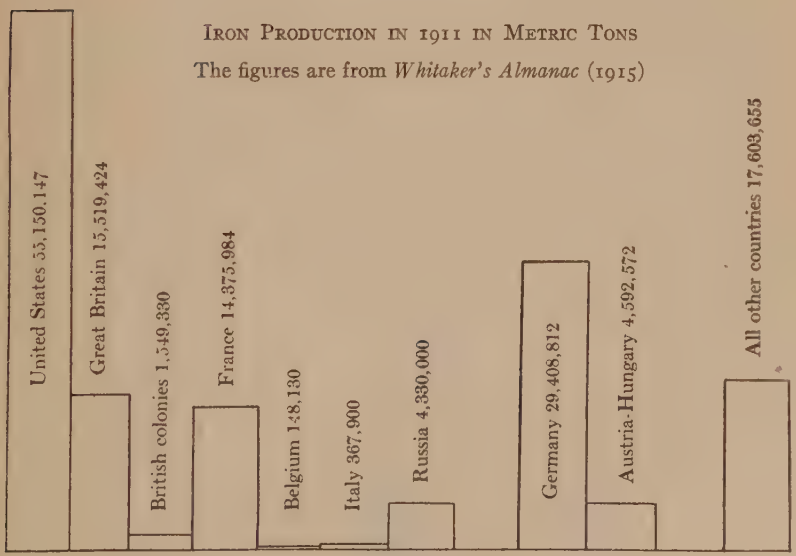
PIG-IRON PRODUCTION IN 1913 IN TONS OF 2,240 POUNDS

The figures are from *Mineral Industry* (1916), p. 414



IRON PRODUCTION IN 1911 IN METRIC TONS

The figures are from *Whitaker's Almanac* (1915)



STEEL PRODUCTION IN 1913 IN METRIC TONS

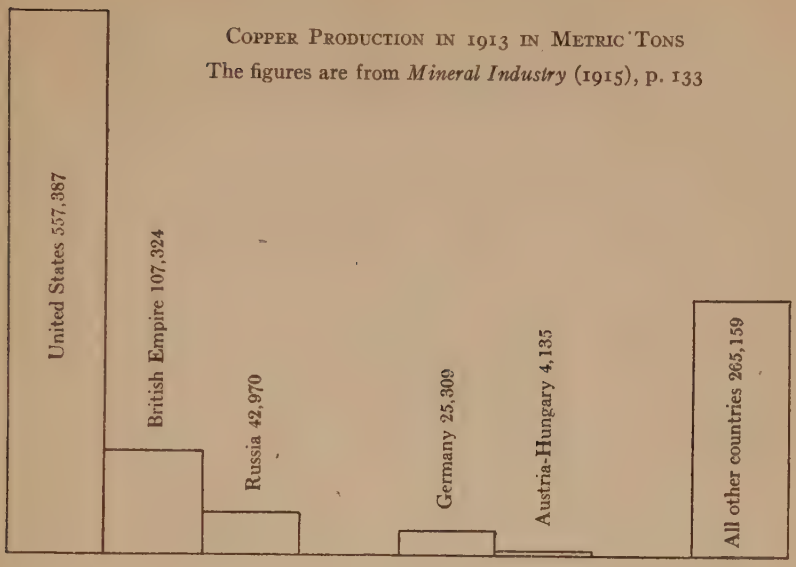
The figures are from *Mineral Industry* (1916), p. 414

IRON RESOURCES IN 1913 IN METRIC TONS

The figures are from "Iron Ore Resources of the World," *International Geological Congress*, XI (1910), xxi–lxxix. The figures are those of iron contents in the ore

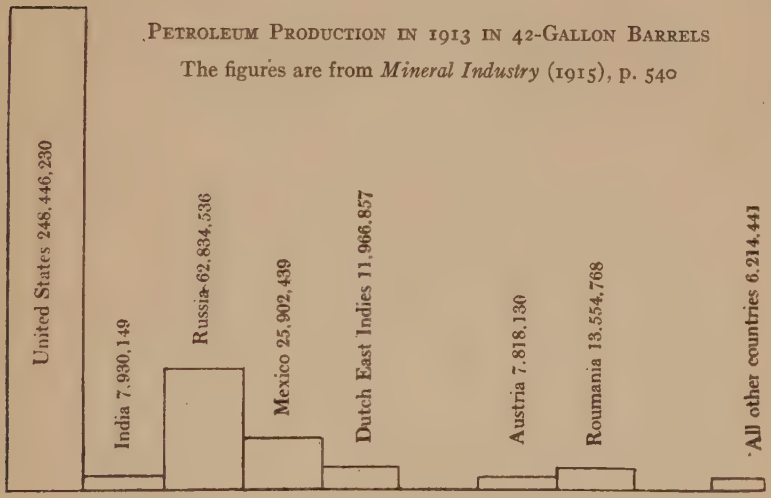
COPPER PRODUCTION IN 1913 IN METRIC TONS

The figures are from *Mineral Industry* (1915), p. 133



PETROLEUM PRODUCTION IN 1913 IN 42-GALLON BARRELS

The figures are from *Mineral Industry* (1915), p. 540

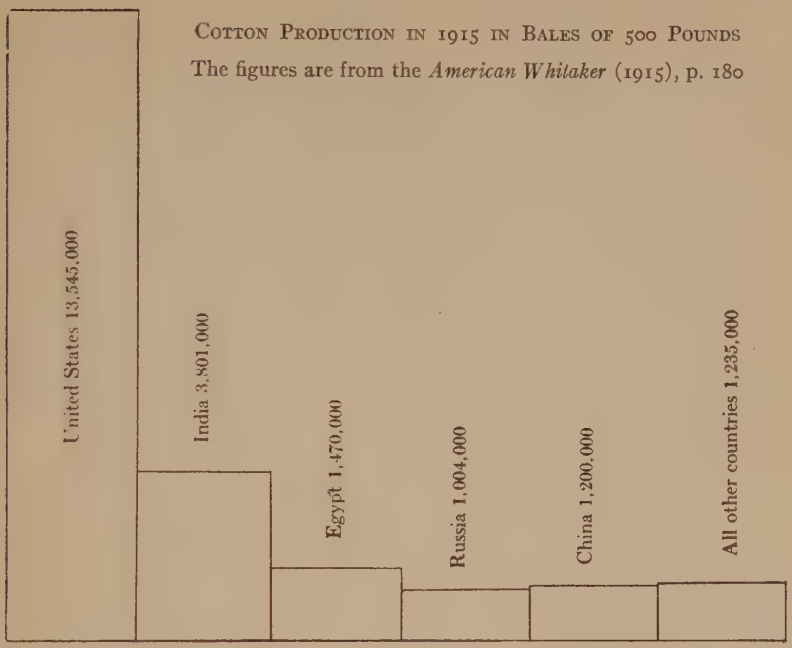


TIMBER LANDS IN 1908 IN ACRES

The figures are from the *Harmsworth Atlas*, p. 20

TIMBER PRODUCTION IN 1908 IN FEET, B.M.

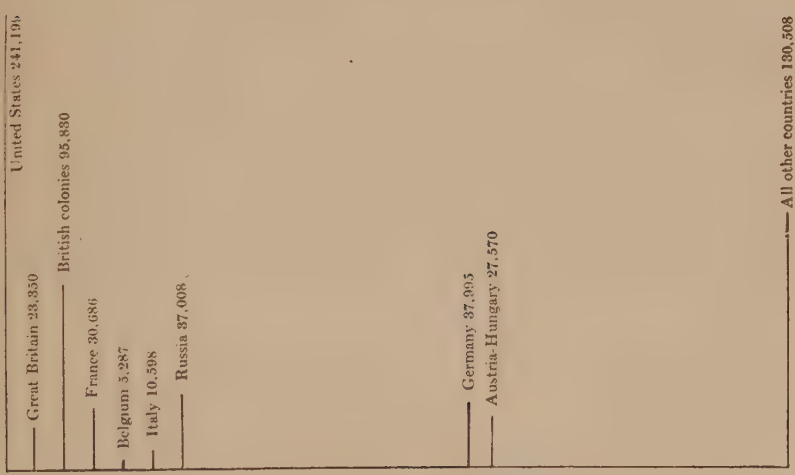
The figures are from the *Harmsworth Atlas*, p. 20



COTTON PRODUCTION IN 1915 IN BALES OF 500 POUNDS

The figures are from the *American Whitaker* (1915), p. 180

3. RAILWAY MILEAGE



RAILROADS IN 1913 IN MILES

The figures are from the *World Almanac* (1914), p. 212

XIII. Some Economic Assets of Germany

1. GERMANY'S RESOURCES IN COAL AND IRON[1]

The industrial development of our time rests upon those two mighty pillars, coal and iron. Germany is one of the lands which nature has richly endowed with these two primary materials of industry. Germany also possesses considerable supplies of other important minerals, especially salts, and zinc, lead, and copper ores. In recent generations we have learned how to recover these minerals and to utilise them more and more perfectly. During the past twenty-five years the value of the direct products of German mining (coal, ores, salts) has increased from about 700,000,000 marks to considerably more than 2,000,000,000 marks. Coal mining alone showed the following development:

	Coal			Lignite			Total Coal Production		
	Average Number of Miners	Production		Average Number of Miners	Production		Average Number of Miners	Production	
		Amount, Million Tons	Value, Million Marks		Amount, Million Tons	Value, Million Marks		Amount, Million Tons	Value, Million Marks
1887.....	217,357	60.3	311.1	29,408	15.9	40.2	246,765	76.2	351.3
1911.....	628,307	160.7	1,572.6	72,567	73.8	183.5	700,874	234.5	1,756.1
Increase.....	410,950	100.4	1,261.5	43,159	57.9	143.3	454,109	158.3	1,404.8
Percentage of increase...	189.1	166.5	405.5	146.8	364.1	356.5	184.0	207.7	399.9

The year 1912 showed still further progress. The production of coal rose to 259,400,000 tons (177,100,000 tons of pit coal and 82,300,000 tons of lignite). Germany's coal production has accordingly been increased threefold during the past twenty-five years.

[1] By Karl Helfferich. Adapted from *Germany's Economic Progress and National Wealth, 1888–1913* (Berlin, 1913), pp. 60–64.

Ed. Note.—Dr. Helfferich was formerly director of the Deutsche Bank and was Minister of Finance of Prussia in 1915. In 1916 he was made Director of the Home Office, in which capacity he is a dictator whose authority is supreme over the domestic economy of Germany. He prescribes the fashions as well as the diet of German civilian life.

Among producing countries Germany occupies the third place, after the United States and England, as shown by the following table:

Countries	Coal Production (Including Lignite) in 1,000,000 Tons		Percentage of Increase
	1886	1911	
United States	103.1	450.2	336.6
Great Britain and Ireland	160.0	276.2	72.6
Germany	73.7	234.5	218.1
Austro-Hungary	20.8	49.2	136.5
France	19.9	39.3	97.5
Belgium	17.3	23.1	33.5

The United States, which still occupied the second position in 1886, is now far in the lead. But Germany has now nearly overtaken England, which occupied the first position twenty-five years ago with a production more than twice as great as ours. In the year 1912 Germany's coal production was 259,400,000 tons, and that of Great Britain and Ireland 264,700,000 tons (preliminary figures). The reduction of the output in England was in part due, however, to the strike of coal miners in that year.

About one-fifth of the total coal production of the world today falls to Germany.

The expansion of the iron industry has been not less remarkable. The production of iron ores within the German customs union (including Luxemburg) amounted in the year 1887 to 10,664,000 tons, in the year 1911 to 29,879,000 tons, or a threefold increase.

Nevertheless our home production of ores was not nearly enough to supply the requirements of our furnaces, and they had to be supplemented by a steadily increasing import of foreign ores, as the following table shows:

	Imports 1,000 Tons	Exports 1,000 Tons	Excess of	
			Exports	Imports
1887	1,036.2	1,744.6	708.4	.....
1912	12,120.1	2,309.6	.....	9,810.5

The production of pig iron developed as shown by the next table:

	Furnaces in Operation	Average Number of Workmen Employed	Raw Materials Smelted 1,000 Tons	Total Production of Pig Iron	
				1,000 Tons	Million Marks
1887	212	21,432	12,057	4,024	166.4
1911	313	47,546	45,068	15,574*	867.9
Percentage of Increase	45.6	121.5	273.8	287.0	421.6

* The production of pig iron in 1912 was 17,853,000 tons.

The production of pig iron in Germany during the past quarter of a century has accordingly been increased more than fourfold.

Germany now occupies the second place among producing countries, as shown by the following table:

PIG-IRON PRODUCTION (IN 1,000 TONS)

Countries	1887	1911	Percentage of Increase
United States	6,520	24,028	368.5
Germany	4,024	15,574	387.0
Great Britain and Ireland	7,681	10,033	30.6
France	1,568	4,411	281.3
Russia	612	3,588	486.3
Belgium	756	2,106	178.6

Here, too, the United States, by reason of her enormous deposits of ores, is far in advance of other countries.

Germany, whose production twenty-five years ago was only a little more than half that of the United Kingdom, which then occupied the first position, had a production of more than 10,000,000 tons of pig iron in the year 1903 and thereby exceeded England's production for the first time; but since that time the German production has increased to more than 15,800,000 tons in 1911 and 17,000,000 tons in 1912, whereas England's production has remained at about 10,000,000 tons.

The world's production of pig iron now amounts to about 75,000,000 tons, of which about one-fourth falls to Germany.

The next table gives a view of steel production in the most important countries:

STEEL PRODUCTION (IN 1,000 TONS)

Countries	1886	1910	Percentage of Increase
United States	2,604.4	26,512.4	910.3
Germany	954.6	13,698.6*	1,335.0
Great Britain	2,403.2	6,106.8	154.1
France	427.6	3,390.3	692.9
Russia	241.8	2,350.0	871.2
Belgium	164.0	1,449.5	783.6

*In the year 1912 Germany's steel production was 15,019,300 tons.

2. UTILIZATION OF POWER IN GERMANY[1]

To what extent the use of steam power has increased in Germany during the past quarter of a century—and this despite the fact that other kinds of power came more and more into competition with steam—is illustrated by the following figures: In Prussia's industries the capacity of steam-engines amounted in 1882 to 222,000 horse-power, in 1895 to 2,385,000 horse-power, and in 1907 to 5,190,000 horse-power. In these twenty-five years, therefore, the capacity increased more than fourfold, and in the twelve years from 1895 to 1907 it was more than doubled. In the whole Empire, for which comparative figures are available only since 1895, the development was similar. In the year 1907 the census showed 124,000 steam-engines with a capacity of 7,587,000 maximum horse-power, or 5,185,000 effective horse-power. What these figures mean becomes clearer when we compare mechanical and human capacity for work. The effective capacity of one mechanical horse-power can be placed at about the equivalent of the physical labour capacity of ten men. Upon this basis the actual work done by German steam-engines in the year 1907 was equivalent to the work done by 52,000,000 men; and the increase of actually effective steam horse-power from 1895 to 1907 was equivalent to an increase of the working population by about 28,000,000 men. These figures should be placed in juxtaposition to those of the working population of the German Empire which showed for the year 1895 18,900,000 persons and 24,600,000

[1] By Karl Helfferich (see p. 142). Adapted from *Germany's Economic Progress and National Wealth, 1888–1913* (Berlin, 1913), pp. 22–28.

for 1908. In the year 1895 there was, accordingly, for each person engaged in labour not much more than one equivalent of his labour represented by steam power. But whereas the labouring population increased from 1895 to 1907 by 5,700,000 persons, the steam-engines of Germany underwent an increase of 2,800,000 horse-power; hence the steam power in 1907 represented more than two equivalents of human labour for each person employed in gainful occupations.

In reality the increase of mechanical labour power was even considerably greater than finds expression in the above figures; for whereas steam was—along with water power, which was relatively little developed—almost the exclusive source of power for motor purposes till into the last quarter of the nineteenth century, the development of the electrical industry and the invention and improvement of explosive motors has, during the twenty-five years under consideration, raised up a new and rapidly developing competitor for steam power.

The electric current, from which the transformation of motor technique during the past quarter of a century proceeded, found application at first and for a long time only in weak-current dynamics. The beginning was made with the invention of the electric telegraph in the third decade of the nineteenth century; it was not followed till three decades later by the invention of the telephone.

The application of electricity in strong-current dynamics, which has produced in recent decades a complete revolution in power and labour-saving machinery, had its origin in the invention of the dynamo machine and in the solution of the problem of power transmission immediately connected with that invention. The enormous advantages in the use of electrical energy depend upon power transmission, which makes it possible to utilise sources of power which, where nature placed them, had hitherto been economically worthless; furthermore it lies in the almost unlimited divisibility, in an economically rational manner, of the power generated at a central point, and in its distribution to any place in any amounts desired.

Water power, especially, assumed a new importance alongside of the steam-engine as a source of energy. Water power must therefore be converted on the spot into energy that can be economically utilised; and there has only been a possibility of doing this at a distance from the water power itself, since energy has become transportable in the form of the electric current.

The transmission of electricity, moreover, has rendered it possible to make an intense use of fuel which previously could not be used at all, or only slightly so. That is especially true of low-grade fuels, which would not pay the expense of long transportation, but can be burnt at the place of origin for generating steam, now that it is possible to transmit to great distances at little cost the energy thus generated.

But above all, the possibility of transmitting electrical power has shown extraordinary results in connection with the development of the gas-engine. By means of gas-motors the gas produced in making coke, which was at first used only for illuminating purposes, was also made available for generating power. The gas-motor next made it possible to convert other gases of slight heating value, like the gases escaping from blast furnaces, into energy in a rational manner. During the decade just elapsed the use of large gas-engines in iron-works made enormous progress.

A new field for the big gas-engine has just begun to be opened within a very few years through the invention of a practical process for gasifying peat, lignite, etc. The gases thus produced are transformed into electrical energy, which is distributed through district stations. Ammonia, as a valuable by-product, is saved in converting peat into gas. Through this latest progress a new power-source of enormous extent has been opened, especially in the broad moors of Germany, the utilisation of which is today still in its most incipient stage. This source of energy is all the more important since the working-up of the peat transforms at the same time into arable land the moor areas, which have hitherto been almost worthless.

While the development of the big gas-engine, in which Germany is far ahead of all other countries, is immediately connected with electricity, the invention and perfection of other combustion-motors, also an achievement of the most recent years, have been independent of any such connection. This has been the case particularly with small motors for automobiles and airships, which have hitherto used benzine almost exclusively as fuel. The recent effort to replace benzine by benzol and other products of coal tar are promising. A new outlook is opened by the Diesel motor, which, in place of high-priced benzine, uses cheap crude oil as fuel, besides tar-oil and recently even coal-tar directly.

This brief survey may suffice to show to what extent hitherto unused natural sources of power have been pressed into the service of humanity in the course of the past twenty-five years. It is evident

that this enormous abundance of newly-created motor power must inaugurate a new epoch in the development of machinery.

3. CORRELATED INDUSTRIAL PROCESSES[1]

One of the most important elements in the maintenance of the collective German industry under the present conditions is the fact that no indispensable intermediate link is missing in the large processes of production. Germany produces herself all her half-finished goods, and she utilizes the residuary products of her industrial processes for the manufacture of valuable auxiliary commodities with such financial results that no other industrial nation in the world even approaches her in this respect. What these auxiliary products mean to Germany at present is more especially demonstrated by sulphate of ammonia and benzol. How much the want of important links in production can harm a country in her industrial processes is demonstrated in England, where the inadequate development of many auxiliary and vital industries has almost crippled some of the country's chief lines of manufacture. Thus the stoppage of the German dyestuff import, which, in money, represents only about a million sterling, threatens the English textile industry, the English wall-paper industry, and many other branches, with a turnover of many millions. In the same way the absence of cheap German half-finished goods has deprived the English iron industry of an important intermediate link. Further, the stoppage of mining timber has gravely inconvenienced the collieries.

Industrially the long-established and growing British principle of producing entirely finished goods and importing the raw and intermediate products of great industries has proved inferior to the German method in time of war. This latter aims at a complete organization of an entire manufacturing process in comprehensive works, which, separately or together, cover the entire series of operations needed. The industrial expansion of Germany, although it is much younger than that of England, has been laid out on more systematic lines and in such a way as to render the country more independent of foreign aid. Under the difficult and strenuous conditions of war it has demonstrated the extreme value of system and method and the advantages which they confer on a nation when it is cut off from the lands from which it draws its raw materials.

[1] Adapted from "German System and Method," *Scientific American Supplement* (March 6, 1915), p. 155.

4. GERMANY'S STRATEGIC RAILWAYS

A. IN GENERAL[1]

The *Army and Navy Journal*, April 10, 1915, quotes from the result of a survey by a Dutch General of the development of the German railway system from a military point of view since the Franco-Prussian War. As early as 1870–71 there were at the disposal of the German military authorities all together 7 railroad lines in North Germany and 3 in South Germany. Only one, that from Berlin to Cologne, had double track. Yet with these facilities it was possible to convey 16 army corps, an aggregate of 450,000 men, to the frontier in 11 days. Since then military authorities have never ceased in the development of the railway system on a strategical basis. The results are striking. Germany now has 12 double-track railways lying between Osnabrück on the north and Ulm on the south, 125 miles east of the Rhine. Every army corps normally garrisoned east of this district has a double-track railway at its disposal. The same facilities were also available for the reserve army corps formed at the time of mobilization.

No less than 18 double-line bridges were, at the time of the beginning of the war, provided for the crossing of the Rhine. Eight to ten cavalry divisions can be conveyed from the Rhine westward simultaneously with the army corps above referred to. Four brigades with the requisite contingent of cavalry and artillery require 96 trains. All of this number of trains could be dispatched in the same general direction in 12 hours. Is was thus possible in August, 1914, to effect the whole transport to the western frontier in about 20 hours. The transport of these troops began on the second day of mobilization, August 3, in the evening. It was completed at noon on August 4. During the night the frontier was passed. Liège was assaulted on August 5 and 6.

For the transportation of troops from the western to the eastern front 6 double-track railways were available. The distance from Maubeuge on the west to Königsberg, just short of the Russian frontier on the northeast, is 994 miles. A military train ordinarily makes about 250 miles in 24 hours. The journey, then, occupied about four

[1] By William L. Park. Adapted from *Railways as a Part of a System of National Defense*, pp. 5–6.

An address delivered before the International Association of Railway Special Agents and Police, at New Orleans, La., May 25, 1916.

days. For the transport of 6 army corps of 40,000 men each, a week was generally allowed. The transportation of this number of men required 124 trains and two or three days were consumed in the necessary preparation.

The limited amount of double trackage in this country would make impossible any similar movements, except in a few sections of the country, for distances which, though absolutely as great as can be made within the whole German Empire, would be comparatively small when the extent of this country is considered. Double trackage alone, however, would not have been sufficient to make the movement possible. The sufficiency of trackage is only one item. Its provision and the entire equipment and organization for its operation, even to a knowledge of what orders would be given under any set of circumstances, have been a subject of expert study and preparation there for 40 years.

B. IN PARTICULAR[1]

In the southwest corner of Prussia is a rectangular piece of territory the western and eastern sides of which are formed respectively by the Belgian and Luxemburg frontiers and the river Rhine. This territory includes about 3,600 square miles and supports a population, including the great centres of Cologne, Coblence, Aix-la-Chapelle, and Treves, of nearly 1,000,000 souls. In other words, it is an area about half as large as New Jersey, if we omit that state's water surface, and just about as thickly populated.

Five years ago this little corner of Prussia had about 15.10 miles of railway to every 100 square miles of territory, and New Jersey 30.23. In five years the Prussian territory has increased her railway mileage to 28.30, and New Jersey to a little less than 30.25.

Five years ago, in the Prussian territory, the only double lines existing were those from Cologne to Treves, from Coblence to Treves, and the two double lines, one on each side of the Rhine, from Cologne to Coblence, thus forming the three sides of a triangle. There was also the double track running from Cologne to Aix-la-Chapelle. These double lines were fed as commerce required, by only two sets of single-track lines, all amounting to a little less than 550 miles of

[1] By Walter Littlefield. Adapted from "Germany's Strategic Railways," published in *Current History*, I (1914–1915), 1001–4. Copyright by the New York Times Co., New York.

Ed. Note.—Walter Littlefield (1867—) is a well-known author and journalist of New York.

traction—a very fair service, considering the products of the country covered.

In the five years, without any apparent industrial and commercial demand for it, this traction has been increased to nearly twice its length, or to about 1,020 miles. Villages like Dumpelfeld, Ahrdorf, Hillesheim, Pronsfeld, and the one health resort of Gerolstein, of comic opera fame, all of less than 1,300 inhabitants, have been linked up by double-track lines with towns like Remagen, St. Vith, and Andernach, whose populations range from 1,500 to 9,000.

Five lines converge on Pelm: the double line from Cologne, the new double line from Remagen via Hillesheim, and the single line from Andernach. Pelm is $2\frac{3}{4}$ miles from Gerolstein, and yet over this short distance between the two villages there are laid down six parallel lines of rail, besides numerous additional sidings. Moreover the double line from Hillesheim to Junkerath crosses over the main Cologne-Treves line by a bridge, and runs parallel to it for some distance before turning off to the left to reach Weiwertz.

In fact, the knot of lines around Junkerath, Pelm, and Gerolstein is a marvel of construction for heavy, rapid transit, for no congestion would arise in a case of a sudden flood of traffic going in various directions, and to secure still more freedom the line from Gerolstein to Pronsfeld has been doubled.

Few of these lines, it is to be noted, cross the frontier. Three of them as late as last May led to blind terminals within less than a day's march from it—the double line from Cologne via Stolberg to Weiwertz, the double line from Cologne via Junkerath and Weiwertz to St. Vith, and the double line from Remagen via Hillesheim and Pelm to Pronsfeld.

The cost of the whole system, with its numerous bridges and multiple sidings, must have been enormous. The German average of $108,500 to the mile would hardly cover it.

Here is what a traveler saw when he visited this corner of Prussia in May, 1914:

> The traveler is as much struck by the significance of the ordinary traffic along these lines as he is by the huge embankments and cuttings on which nothing has yet had time to grow, and by the inordinate extent and number of the sidings to be seen everywhere. Baby trains, consisting of a locomotive and four short cars, dodder along two or three times a day, and if a freight train happens to be encountered, it will be found to be loaded with railway plant.

Another point that is noticeable is that provision exists everywhere at these new junctions and extensions for avoiding an up-line crossing a down-line on the level. The up-line is carried over the down-line by a bridge, involving long embankments on both sides and great expense, but enormously simplifying traffic problems when it comes to a question of full troop trains pushing through at the rate of one every quarter of an hour, and the empty cars returning eastward at the same rate.

The detraining stations are of sufficient length to accommodate the longest troop train (ten cars) easily, and they generally have at least four sidings, apart from the through up and down lines. Moreover, at almost every station there are two lines of siding long enough for troop trains, so that they can be used to some extent as detraining stations, and so that a couple of troop trains can be held up at any time while traffic continues uninterrupted.

5. GERMAN DISCIPLINE[1]

In socialized Germany the state owns railroads, canals, river transportation, harbors, telegraphs, and telephones. Banks, insurance, pawnshops, are conducted by the state. Municipalities are landlords of vast estates; they are capitalists owning street-car lines, gas plants, electric-light plants, theatres, markets, warehouses. The cities conduct hospitals for the sick, shelters for the homeless, soup-houses for the hungry, asylums for the weak and unfortunate, nurseries for the babies, homes for the aged, and cemeteries for the dead.

Add to this the vast and complex system of state education, a system of training that aims at livelihood. Nothing like the perfection, the drill, and the earnest, unsmiling efficiency of these elementary and trade schools exists anywhere else in the world. In 1907 there were 9,000,000 children in the elementary schools, taught by 150,000 teachers, nearly all masters, as the "school ma'am" does not flourish in the Kaiser's realm. Every one of these pupils is headed for a bread-and-butter niche in this land of super-orderliness. And more than 300,000 persons are employed by the state in some form of educational work, training the youth into adeptness, in all sorts of schools.

The army, as well as the school, brings home to every German family the fact that the state is watchful—and jealous. It demands

[1] By Samuel P. Orth. Adapted from an article in *The World's Work*, XXVI, 315–21. Copyright 1912.

Ed. Note.—Samuel P. Orth (1873—) is professor of political science in Corne University. He is the author of many books on political and social questions.

that two full years of every young man be "socialized"; and the peasant woman and the artisan's wife must contribute her toil to the toll that the vast system of state discipline demands.

Even the church, that form of organized social effort which is everywhere first to break away from the regimen of the state, remains "established." So I might continue through almost every activity—the vast system of state railroads, mines, shipyards—and include even art and music.

This socialized Germany is also an industrialized Germany. Everyone knows how cleverly advertised are German goods. But it is always well to remember that this race of traders and manufacturers has somehow, in one generation, come from a race of solid scholars, patient artisans, and frugal peasants. The old Germany has disappeared; the Germany of the spectacles, the shabby coat, and the book; the Germany of Heidelberg and Weimar. A new order has taken its place. As you ride in the great express from Cologne to Berlin you never are out of sight of clusters of tall, smoking chimneys. Symbolic of the new Germany are the Deutsche Bank, the trade of Hamburg, and the steel works of Essen.

Now, how has it been possible to make this transformation? To create out of a slow, plodding, peasant-artisan people an industrialized population; out of a race of scholars a race of manufacturers; to fill a land no larger than one-half of Texas with 65,000,000 people who are breeding at the rate of nearly a million a year, and to engage the state in doing all sorts of things for these thriving families? It is the political miracle of the century, and its socialized efficiency is the talk of the hour. How has it been accomplished?

The Kaiser has adapted, line for line and point for point, the pattern of mediaeval feudalism to the exigencies of modern industrialism. So, to begin with, the Kaiser has an obedient people, in whom the feudal notion of caste is second nature. Everyone has his place and shall keep it. Such shifting as now is tolerated is due to wealth and to the kind of ambition which luxury always awakens.

You cannot have superimposed classes without obedience. The average German is docile and wants to be told what to do.

The government has its eager hands in every pocket, its anxious fingers on every pulse. From the cradle to the grave the state watches the individual, commands him, and, in a way, cares for him, always seeing to it that he has a place in the national economy and that he keeps it.

To an outsider, of course, the inner workings of the mind and heart are hidden. But the outer aspect of the German state is perfectly patent. It is mechanism—there can be no doubt about it—the mechanism of the solar system. It is a land where every member of society has an ordained orbit and moves in it around the central sun, the state, which radiates a mystic gravitation into every activity—almost every thought—of every man, woman, and child.

Here you see the most varied activities held to the ideals of efficiency through a perfected feudalism. So that all Carl and John need to do is to obey; then they are taught the rudiments of learning and a trade, are insured against the most disturbing episodes of life, assured also of some leisure, considerable amusement, and a decent burial. And that is life!

Of all invented contrivances this German machine is the most amazing—this vast enginery of state, with the patents of Hohenzollern, Bismarck & Co. on every part, that has reduced the life of a great people to complacent routine and merged the rough eccentricities of all into a uniformity of effort and ambition.

Germany's system is built upon discipline; hard, military, iron discipline, that grips every baby in its vise and forces every man into his place; a benevolent tyranny, no doubt, but nevertheless a tyranny; an efficient feudalism, but none the less a feudalism of self-conscious caste and fixed tradition.

XIV. Some Economic Liabilities of the Allies

1. THE THEORY OF *LAISSEZ-FAIRE*[1]

Nature has implanted in every man's breast an instinct which teaches him intuitively to pursue his own happiness; and by connecting the welfare of every part of society with that of the whole she has wisely ordained that he shall not be able to realize his own wishes without contributing to the happiness of others.

Every man may thus safely be intrusted with the care of working out his own prosperity. It is not necessary for governments, it is therefore no part of their duty, to teach to individuals what will most

[1] By Piercy Ravenstone. Adapted from *A Few Doubts as to the Correctness of Some Opinions Generally Entertained on the Subjects of Population and Political Economy* (1821), pp. 2–3.

This is a classical English statement of the theory that an "invisible hand," as it were, leads the individual in seeking his own welfare to promote national welfare. The question is, Does it promote national efficiency for war?

conduce to the success of their pursuits; they are ill-calculated for such a superintendence. All care of this sort is on their part wholly impertinent. Their functions are of quite a different nature; to correct the vicious attachment to their own interests which too frequently induces men to seek their own apparent good by the injury of others, which would disorder the whole scheme of society, to bring about what they mistakenly consider their own happiness. To restrain, not to direct, is the true function of the government; it is the only one it is called on to perform, it is the only one it can safely execute. It never goes out of its province without doing mischief. The mischief is not always apparent, for the constitution of the patient is often sufficiently strong to resist the deleterious effects of the quackery. But it is not safe to try experiments which can do no good, merely because the strength of the patient may prevent them from being injurious.

The spirit of interference has never manifested itself so strongly as of late years. It constitutes the very essence of modern political economy. Everything is to be done by the state; nothing is to be left to the discretion of individuals. It is proposed to transfer men into a species of political nursery ground, where the quality of plants is to be regulated with mathematical exactness, to be fitted to the capacity of the soil; where every exuberance in their shoots is to be immediately pruned away and their branches confined within the bounds of the supporting espalier.

2. SOCIAL CUSTOMS AND EFFICIENCY IN WAR[1]

In Anglo-Saxon and Latin countries women are traditionally home-keepers. In the Teutonic nations they are traditionally co-workers with their men in the work of the world. This difference in social customs is proving at the present time one of the most powerful factors in the world-war.

The information has been disclosed that the Allies were outnumbered on the western front in the spring and early summer of 1918. It has seemed impossible to many people that this could be true; for—leaving America out of consideration at this period—is not the population of Great Britain, Canada, Australia, France, and Italy greater than that of the Central Powers? It has seemed incredible that the Allies could be outnumbered in face of the indisputable population statistics.

[1] An editorial.

Numerous explanations have been offered for the enigma. The one most frequently given is the dissipation of British forces in consequence of the necessity of keeping troops in Mesopotamia, Egypt, and Saloniki; the maintenance of a large naval force, etc. Another explanation is the more effective utilization by Germany of her prisoners of war, including civilian populations from conquered territories, the number of such prisoners employed on farms and in industrial establishments in Germany being estimated in 1917 at one million two hundred thousand. Still another explanation is that the German organization has more effectively mobilized the man power of the country in consequence of a more rigid curtailment of non-essential production.[1] Not so many men are required back of the lines in Germany relatively to the number engaged at the front as in the allied countries, particularly in England, where many are still engaged in pursuits which are relatively unimportant. The most important factor in the situation, however, appears to be the part that women play in industry. It has been estimated that there were one million five hundred thousand women engaged in British industry in the spring of 1918. The English have derived great satisfaction from this remarkable showing and it has given rise to numerous volumes and scores of articles. Under the circumstances, that is, in view of the age-old tradition against women in industry, the British women have done extremely well. Their spirit, in the face of a most cherished heritage, coupled with powerful opposition from British trades unions, is admirable. But in contrast with the part women are playing in the Central Powers this showing could in the spring of 1918 cause only anxiety as to the outcome of the struggle.

The German woman's participation in agriculture is proverbial, and the war has of course necessitated an even heavier carrying of the burden of agricultural production by female labor. This is equally true in Austria, Bulgaria, and Turkey. But it is not only in agriculture that the German women are playing a tremendously important rôle. Even before the war there was a steadily increasing flow of women into industrial pursuits in Teutonic countries. While the complete statistics for women in industry in Germany at the present time are not available, it was reported that as early as the middle of 1916 there were more women than men employed in the great metal industries of the Berlin region, and on March 1, 1917, it is reported

[1] For a statement of the conscription law of Germany, December, 1916, see selection XVIII, 3B (chap. v).

that there were 3,973,457 women insured in the sick-benefit funds of Germany.[1] Inadequate as these data are, they clearly show an enormously greater participation of women in essential production in Germany than in England. Between the ages of eighteen and forty-five there are in the neighborhood of 11,000,000 women in Germany, and it is probably a conservative estimate that three-quarters of these are effectively employed in the creation of the basic necessities for modern warfare. With 8,000,000 German women in industry as against 1,500,000 women in English industry it means a release of 6,500,000 men, roughly speaking, for the military establishments. Nor do knitting and other forms of household manufacture take the place of machine production; they may reduce the above differences, but they do not eliminate them. The German organization is thus enabled to place a much larger percentage of the man power of the nation in the army than it has been possible for the Allies to do. Possibly, in view of Anglo-Saxon social sanctions, it is the best that we can hope that at the end of four years of war 1,500,000 British women should be engaged in industry. If so, we must set it down as one of the serious economic liabilities of the Allies, a liability which can be offset only by such a marked superiority of man power as the entrance of America into the conflict affords. It is important to remember, however, that without America's entrance into the war the Allies would quite obviously have had to succumb through defeat on the western front, a defeat made possible because the "economic position of women" in the Central Powers is such that they have been enabled to place a larger percentage of their man power in the active military establishments than have the Entente nations.

3. THE PENALTY OF TAKING THE LEAD IN INDUSTRY[2]

An industrial system which, like the English, has been long engaged in a course of improvement, extension, innovation, and specialization will in the past have committed itself, more than once

[1] See *German Trade and the War* (Miscellaneous Series, No. 65, Department of Commerce), p. 90.

[2] By Thorstein Veblen. Adapted from *Imperial Germany and the Industrial Revolution*, pp. 124–28. Copyright, 1915. Published by B. W. Huebach, New York.

ED. NOTE.—Professor Veblen is one of the best known of American economists. He is the author of several volumes and a large number of articles on economic and social questions.

and in more than one connection, to what was at the time an adequate scale of appliances and schedule of processes and time adjustments. Partly by its own growth and by force of technological innovations designed to enlarge the scale or increase the tempo of production or service, the accepted correlations in industry and in business, as well as the established equipment, are thrown out of date. And yet it is by no means an easy matter to find a remedy; more particularly is it difficult to find a remedy that will approve itself as a sound business proposition to a community of conservative business men who have a pecuniary interest in the continued working of the received system, and who will not be endowed with much insight into technological matters anyway. So long as the obsolescence in question gives rise to no marked differential advantage of one or a group of these business men as against competing concerns, it follows logically that no remedy will be sought. An adequate remedy by detail innovation is not always practicable; indeed, in the more serious conjunctures of the kind it is virtually impossible, in that new items of equipment are necessarily required to conform to the specifications already governing the old.

So, e.g., it is well known that the railways of Great Britain, like those of other countries, are built with too narrow a gauge, but while this item of "depreciation through obsolescence" has been known for some time, it has not even in the most genial speculative sense come up for consideration as a remediable defect. In the same connection American, and latterly German, observers have been much impressed with the silly little bobtailed carriages used in the British goods traffic; which were well enough in their time, before American or German railway traffic was good for anything much, but which have at the best a playful air when brought up against the requirements of today. Yet the remedy is not a simple question of good sense. The terminal facilities, tracks, shunting facilities, and all the ways and means of handling freight on this oldest and most complete of railway systems are all adapted to the bobtailed car. So, again, the roadbed and metal, as well as the engines, are well and substantially constructed to take care of such traffic as required to be taken care of when they first went into operation, and it is not easy to make a piecemeal adjustment to later requirements. It is perhaps true that, as seen from the standpoint of the community at large and its material interest, the out-of-date equipment and organization should prof-

itably be discarded—"junked," as the colloquial phrase has it—and the later contrivances substituted throughout; but it is the discretion of the business men that necessarily decides these questions, and the whole proposition has a different value as seen in the light of the competitive pecuniary interests of the business men in control.

This instance of the British railway system and its shortcomings in detail is typical of the British industrial equipment and organization throughout, although the obsolescence will for the most part perhaps be neither so obvious nor so serious a matter in many other directions. Towns, roadways, factories, harbors, habitations, were placed and constructed to meet the exigencies of what is now in a degree an obsolete state of the industrial arts, and they are, all and several, "irrelevant, incompetent, and impertinent" in the same degree in which the technological scheme has shifted from what it was when these appliances were installed. They have all been improved, "perfected," and adapted to meet changing requirements in some passable fashion; but the chief significance of this work of improvement, adaptation, and repair in this connection is that it argues a fatal reluctance or inability to overcome this all-pervading depreciation by obsolescence.

All this does not mean that the British have sinned against the canons of technology. It is only that they are paying the penalty of having been thrown into the lead and so having shown the way. At the same time it is not to be imagined that this lead has brought nothing but pains and penalties. The shortcomings of this British industrial situation are visible chiefly by contrast with what the British might be doing if it were not for the restraining dead hand of their past achievement, and by further contrast, latterly, with what the new-come German people are doing by use of the English technological lore. As it stands, the accumulated equipment, both material and immaterial, both in the way of mechanical appliances in hand and in the way of technological knowledge ingrained in the population and available for use, is after all of very appreciable value; though the case of the Germans should make it plain that it is the latter, the immaterial equipment, that is altogether of first consequence rather than the accumulation of "production goods" in hand. These "production goods" cost nothing but labor; the immaterial equipment of technological proficiency costs age-long experience.

XV. The Economic Isolation of Germany[1]

The question of Germany's economic ability to hold out during the war is of paramount general interest. It is the first time under modern conditions that an attempt has been made to isolate a great nation completely from the outer world, and therefore also the first time that a country, hitherto existing as an integral link in the world's economic system, is put to the test of having in the main to support itself and prove its ability to subsist under these new conditions. In wondering doubt the world has awaited the result.

To begin with, it was no doubt the all but universal opinion that Germany would be able to hold out for a limited period until her accumulated supplies were exhausted, and then have to give way. When the fighting had lasted six, twelve, and twenty months, and Germany still showed undiminished economic strength, discussion started everywhere regarding the economic possibility of such a demonstration of strength. The interest in these discussions may best be judged by the fact that well-nigh everybody has felt the necessity of forming his own theory regarding the problem of war finance. For this reason my attempt to analyze the problem may count upon interest from the great majority of readers who do not generally devote time to the study of such subjects.

There seem to be two main fallacies that have led England and a large part of the rest of the world to the conclusion that Germany could not stand a prolonged period of isolation. The one is the exaggerated idea people have regarding the importance of foreign trade under modern economic conditions. This view is natural to England and to a certain extent justified by conditions. But as for the other great nations, it is mainly a popular illusion arising from the disproportionate interest devoted to foreign trade in politics and in statistics. The other fallacy is that people live on accumulated riches, on "money," or large stocks of commodities. The entirely

[1] By Gustave Cassel. From *Germany's Economic Power of Resistance*, pp. 76–80. Copyright by the Jackson Press, 1916.

Ed. Note.—The author is professor of political economy in the University of Stockholm, and his writings are well known to all students of economic theory. In February, 1916, he was invited to visit Germany as a neutral economist and to make a report on financial and economic conditions there. There is evidence that he was "steered" through Germany by the government. But however this may be, his conclusions seem to have been verified by the staying strength exhibited by Germany since that time. The paragraphs quoted here are the author's conclusions.

exaggerated ideas as to the importance of stocks of commodities under modern economic conditions has led to the conclusion that a belligerent country, which does not receive help from outside must sooner or later exhaust its resources.

The course of the war has already proved the untenable nature of these views and fully proved, first—as sound teachings of political economy long ago should have proved—that a nation lives mainly on what it day by day creates by its productive work, and second, that a country like Germany is able to do so without exchange of commodities with foreign countries.

But the human mind is slow to divest itself of ideas to which it has become accustomed. In England people are reluctant to admit fully the truth forced upon them by actual development; they cling to the idea that it is only the incompleteness of the blockade that has enabled Germany to live, that she will ultimately be starved into submission if only every little hole can be still more effectively stopped. But they are mistaken. As regards supplies from the northern countries, they are under present conditions very acceptable to Germany; but it would be utterly wrong to ascribe to them any sort of influence as regards Germany's ability to hold out. Of great importance are the supplies from the southeast. But Germany is laying her plans for continued war economy without taking count even of these supplies.

The strongest, in fact the conclusive, proof that Germany can economically hold out is that she has already done so for twenty months. In the preceding chapters I have shown that the first year of the war was by no means specially favorable economically, and that even taking the whole period of the war this cannot be considered the case; that, on the contrary, a number of circumstances indicate that Germany's economic conditions in certain important directions are better to-day [1916] than during the earlier phases of the war. I have given reasons for the notion that this opinion, financially considered, may well be assumed to outweigh the deterioration in other fields. This circumstance is obviously subversive of the theory on which the blockade of Germany is based.

Of course Germany is not so strong economically as during the last years of peace. But in peace-time consumption had reached a scale which could stand a great reduction. We have seen that this reduction need not in essentials reduce the German to a lower level of consumption than that on which many other civilized people exist or than even the Germans themselves were accustomed to a very few

decades since, and on which they were an active and powerful people. The lowering of the standard of living—it may appear to outsiders important and for those concerned hard—cannot involve any serious harm or prevent the continuation of the war.

Let any Swede who imagines that the German people have reached the lowest standard of living that a nation can endure call to mind only for a moment the privations our people suffered during Sweden's wars. By comparison, what has hitherto been demanded from the German population in the way of economic sacrifice will then appear insignificant. And if any German thinks of what his people had to pass through during the long and bitter wars that from time to time have been waged in and over Germany, he will admit that any comparison with present times is absurd.

If the war were to continue for years Germany would be weakened economically. But there is hardly any real reason to assume that this weakening should occur more rapidly in Germany than in the countries of her opponents. If the belligerents' economic power is used up by degrees, but about the same degree for all, the war can, in so far as it depends on economic conditions, continue from year to year until Europe is completely exhausted. Truly a melancholy perspective! But the future can hardly be viewed in any other light by anyone who objectively strives to gain a clear understanding of what it means to say the war is to continue until Germany's economic ruin is accomplished.

My task has been to give as far as possible a correct, but in any case a fully objective, view of Germany's economic strength and ability to hold out. How far I have succeeded will be judged differently. I only wish that that judgment may not be affected by political views of the great struggle or by a sympathy for the one or other side. Indeed there is after all no necessity why a political point of view should enter when we are considering a question like the present. The task I have attempted is essentially of a neutral nature —this point I would again emphasize. It should be of at least equal interest to Germany's opponents as to Germany herself to obtain an objective statement of her economic position. I am prepared to find that anti-Germans of the kind that cannot abandon ingrained political bias will consider my statements too favorable for Germany and will accuse me of lack of objectivity. This does not worry me. But I venture to hope that men in responsible positions on the Entente side may find my conclusions worthy of consideration. They may perhaps

think that my estimate of Germany's economic strength requires some modification. But from their point of view a most important thing is not to make any mistake in the opposite direction. No impartial observer, and hardly any of the leading men of the Entente themselves, would deny that they have from the beginning underestimated the economic strength of their opponent. This mistake should not be continued. If the war is to go on indefinitely one should make sure that one understands fully what has to be faced.

I can imagine that Germany's opponents argue thus: "Next summer, autumn, Christmas, or at any rate in a year, Germany's economic resources must be exhausted; having made such sacrifices for the war, we must try to hold out for the comparatively short period it may still last." It would be disastrous if such arguments should prevail any longer, for they are absolutely wrong. But I am not discussing military prospects, which I am not competent to judge. But assuming that the military position remained about stationary, the economic position will not, as far as I can see, offer any reason for concessions on the part of Germany. In three, six, or twelve months Germany's economic strength will essentially and from the point of view of continuing the war be about the same as now. I have probably had better opportunities of forming an opinion on this point than the statesmen of the Entente and have been able to do so under more undisturbed conditions than they.

V

THE PROBLEM OF INDUSTRIAL MOBILIZATION

Introduction

The chapter on the "Nature of Modern War" made it clear that a world-war is not merely a conflict of armies; that it is rather a titanic struggle between rival economic organizations. The mobilization of a nation's industries is therefore of equal importance with the mobilization of armies. Indeed, mobilization of the military forces and mobilization of the industrial forces are inseparably linked and must be viewed as a single problem. This basic fact was not realized by all the belligerents at the outbreak of hostilities; and the human and material losses sustained before this conception of the ultimate requirements of war was arrived at have been almost incalculable.

Those who had been studying the problem, with the experience of Europe as a guide (Section XVI), had gained, before April, 1917, some comprehension of the nature of the task which would confront the United States in the event that we should be drawn into the struggle. But although warnings were early issued as to the readjustments that would be required of American business, it is significant that there was a year of floundering before American business men as a whole, and even before governmental agencies as a whole, reached a clear understanding of what was required in the way of industrial reorganization. The notion that money would enable us to buy goods somehow and somewhere was perhaps the greatest obstacle in the way of a realization of the true nature of the problem. If any given individual has placed in his hands a large amount of money, he can of course buy whatever he desires. Why then could not the nation with unlimited funds at its disposal forthwith purchase the unlimited quantities of supplies required? Thus was the individual viewpoint read into a national situation, to which it could apply only under conditions where there was a large neutral world standing ready to furnish us with all the supplies required. Not until the individual pecuniary concept could be replaced by the concept of national production of goods could real progress in industrial mobilization be made.

There are numerous methods of mobilizing a nation's industries (Section XVII). They are not mutually exclusive, but neither are they coequal in effectiveness. More and more in the experience of all the belligerents, pure voluntary methods have been found to be both slow and unscientific—that is, dependent upon the psychological reactions of individual business managers and laborers rather than based upon a careful analysis of the complex requirements of the situation in its entirety.

In Section XVIII we find authoritative statements of the experiences through which the various European belligerents have passed. The contrast between France and England is striking enough and is indicative of the effect that invasion of a nation's territory may have in hastening the individual sacrifices and industrial readjustments that are required. But the contrast between Germany and Russia is even more striking. Germany's mobilization of national resources, as related by her own officials in charge thereof, reveals a clear understanding of the basic requirements of war, of the necessity of a close union of economic and military strategy, and of the correlation of military and industrial activities, involving every aspect of national life. Particularly significant is the German "organization for victory" (Section XVIII, 3, C) at the beginning of the third year of the war. The spectacle of Germany already clearly perceiving the impending collapse (economic, if not political) of Russia and withdrawing to a "Siegfried line" where defense on the west front would be relatively easy, and then for many months devoting every energy to the production of basic raw materials in hitherto undreamed of quantities in order to lay the foundation for an eventual output of munitions and supplies that would insure the materials for victory, is without a parallel. The marvel only is that she did not have the diplomatic astuteness to pacify America for yet a few more months; for delay on our part for another half-year might well have sealed the fate of Europe.

The old régime in Russia, on the other hand, never understood the dependence of war upon economic organization. Neglect of the economic side of war had virtually destroyed the power of Russia even before the revolution had wrought its spiritual decimation of the Russian forces. Russia was obviously defeated before the revolution of 1917—defeated while it still maintained in the field the largest national army known to the annals of warfare. And who can say that lack of the basic necessities for existence on the part of the

masses, while the trading and privileged classes reaped war profits uncontrolled, may not have been an instrumental factor in the decline in Russian morale and in the eventuation of social and economic chaos in that unhappy land?

XVI. The Nature of the Problem

1. CONVERSION OF INDUSTRIES TO WAR PRODUCTION[1]

If there should be an open break between the United States and a first-class foreign power, taking form in a declaration of war and calling for the raising of an adequate military and naval force, back of the federal machinery of the War and Navy departments there must be a quick mobilization of the industries of the nation to meet the increased demands for munitions and other supplies for the fighting forces. The survey of the industries of the country has been made, manufacturers are anxious to cooperate in meeting the governmental needs, but the great and immediate step must be to show them how to proceed. This must be a process of education and it can not be a quick process. It takes time to convert a factory used for the manufacture of products of peace into an ammunition plant. The plants may be had in a hurry—many have been offered in advance of an open break—but the great task of mobilization will be to get them running in new grooves.

A close observation of the experience in foreign countries has shown us the vital necessity for a peace-time prearrangement for conversion in all industries. Wars, as now waged, involve every human and material resource of a belligerent nation. Every factory and every man, woman, and child are affected. Every sinew of industry, of transportation, and of finance must be harnessed in the country's service. In England two years and a half ago there were three government arsenals. Today thousands of England's industrial plants are being operated as government factories for the production of war materials, and many other thousands of plants, still under private control, are centering their energies in this same direction. The teaching of the munition-making art to these thousands of manufacturers and to millions of industrial workers, both men and women,

[1] By Howard Earle Coffin. Adapted from "Mobilizing Our Industries," *Independent*, LXXXIX (February 19, 1917), 304.

Ed. Note.—It will be noted from the date of this reference that this article was written by Mr. Coffin two months before the United States entered the war. Mr. Coffin was at the time Chairman of the Committee on Industrial Preparedness.

has called for a work in industrial organization and education such as the world has never before seen.

We have here in the United States vast resources in manufacturing and producing equipment, but they are unorganized and uneducated for the national service. Our observations of the European war have taught us that it is upon organized industry that we must base every plan of military defense. In the event of trouble with any one of the several first-class powers, between 80 and 90 per cent of our industrial activity would of necessity be centered upon the making of supplies for the government. We have learned also that from one to two years of time and of conscientious effort are needed to permit any large manufacturing establishment to change over from its usual peace-time commercial line to the quantity production of war materials for which it has had no previous training.

We have had no experience in the kind of warfare now being waged abroad, and yet this is exactly the sort of thing for which we must prepare, or immediately enter upon if war should now be declared, or it is worse than useless that we prepare at all. We have the investments in plants, in tools, and in machinery, and more important still are our resources in skilled workers. But it is only through the most careful methods of organization and education in time of peace that we may make all these resources available in time of emergency.

Each manufacturing plant must be taught how to make that particular part or thing for which its equipment is best suited. It may be that that education must start at once to meet actual and present pressing demands, but in any event annual educational orders of war materials of such small size as not to interfere with commercial products, must be made and delivered each year under government inspection if our plants and workers are to be ready in case of need. Skilled labor in every line must be so enrolled as to ensure against its loss to industry through enlistment in the fighting forces. There exists no other means of harnessing industry in the defensive service of the government.

We must nationalize the munitions industry politically. Each community and each political district will have its share of government responsibility and expenditure in this work. To each community will be brought home the part it must play in the event of national emergency. We have long known that we must nationalize geographically the munition-making art and that to leave it centered near our east coast would be suicidal.

There is no mystery in the job of preparing the country for defense. Through too much secrecy we deceive, and can deceive, the American people only. Manufacturers should have been looking their part in the national scheme of things military squarely in the face months ago. Their vital interests both commercial and national require that each shall know how to do his "bit" in time of need. If in the present situation any manufacturer can have the idea that he may sit in security with folded hands because Congress has voted battleships and a meagre increase in the standing army, he needs to consult a brain specialist. There are in war, as in peace, three Graces, and their names are "Army, Navy, and Industry"—and the greatest of these is Industry. The European war is, in its last analysis, a war of munitions—a war of factories, of producing powers, and of sweating men and women workers.

2. THE FUNDAMENTAL REQUIREMENTS OF WAR[1]

Four things, in the main, are required of the United States in the next year:

1. Ships—as many as can be built.
2. Munitions and materials of war—as much as can be supplied.
3. Food—as much as can be produced.
4. Soldiers—as many as can be trained.

Numerous subclassifications might be made here, but this simple statement of needs will most effectively serve our present purpose. The problem that is before us in supplying the unlimited quantities of ships, munitions and materials, food, and soldiers that are required may be made clear by a simple diagrammatic statement:

50,000,000 workers[1] ordinarily produce

1. Indispensable goods:
   - *a*) Prime necessities for physical and mental efficiency
   - *b*) Replacement of capital goods used in producing such necessities
   - *c*) New capital goods used in producing necessities
2. Dispensable goods:
   - *a*) Luxuries and many conventional necessities
   - *b*) Replacement of capital goods used in producing these dispensable commodities
   - *c*) New capital goods

[1] By Harold G. Moulton. From "Industrial Conscription," *Journal of Political Economy*, November, 1917. Delivered as an address before the Western Economic Society and the City Club of Chicago, June 21, 1917.

[2] I assume 50,000,000 workers; there may be more or less, but the exact number is quite immaterial. Call it x workers if you prefer.

If we place one million men in the army the number of industrial workers this year will be reduced to 49,000,000. This loss of numbers may, however, substantially be made good by impressing into the industrial ranks those who are normally not employed. In order to be conservative let us assume that we have the same working force this year as last. What now are the alternatives before us?

1. Produce none or few of the indispensable war supplies that the situation requires.

2. Speed up the workers and increase efficiency to a point where they can produce, not only the customary amounts of both classes of goods, the dispensables and the indispensables, but in addition the unlimited quantities of ships, munitions, materials, and food required for the war.

3. Produce less of the things normally produced—the dispensables—and transfer our national energy into the production of the indispensable sinews of war.

I take it that it will be at once conceded that the first alternative is out of the question; it stands as an admission of failure.

The second alternative is regarded by many as adequate, or substantially adequate, to the task before us. We are said to be a big, rich, powerful country that can do anything once we have buckled to the task with characteristic American energy and ingenuity. "We will get there somehow." Now while we can doubtless speed up somewhat, we cannot by that means produce more than a fraction of the munitions, ships, and food required. For it must be observed that the speeding up of workers in *present* lines of production will merely give us additional quantities of the things normally produced, luxuries and other dispensables, along with the things that are indispensable. In so far as we are at present engaged in producing food, ships, and war materials, speeding up will help. But it will scarcely begin to solve the problem. At best it will give us a little more of the indispensables required for war.

There is also much current discussion of the wonderful gains that may be made through increasing efficiency. It is argued that we should make our patriotic impulses the occasion for the universal introduction of scientific management. It of course goes without saying that we should do all that we possibly can to further the improvement of industrial methods; and doubtless something may be accomplished. But it must be remembered: first, that increased efficiency will be of importance only in so far as it results in the production of the indispensable commodities; secondly, that a time

of speeding up and of reorganization and dislocation in industry is not a favorable time for experimentation with industrial methods; thirdly, that the number of trained men available for the introduction of scientific management is very limited, and that, in any event, business managers, under the spur of private gain, have been endeavoring to improve their methods as fast as possible; and, fourthly, that while it is as easy to make good resolutions in a time of national crisis as it is in a revival meeting, it is unfortunately just about as easy to linger on with accustomed methods of business as to persist in habitual modes of conduct. It would seem, therefore, that we cannot expect too much from the improvement of business processes. Perhaps we may reasonably count upon a substantial increase in efficiency to be one of the ultimate effects of the war; but our problem now is immediate, not ultimate. The time available is a matter of months rather than of years.

At this point it should be emphasized that the position of the United States is unique, so far as the allied nations are concerned. England, for instance, at the outbreak of the conflict could import vast quantities of munitions and supplies from other countries.[1] England, therefore, had a fourth alternative, one denied to us because the struggle is now world-wide. All of the materials of war that we furnish must come from the current energy of our own people. We must ourselves produce these ships, munitions, food supplies, and stocks in the coming months. There is no one else to do it for us. In this connection I should like to emphasize with all the power at my command the argument that we cannot by bond issues shift the burdens of this war to future generations. The mere fact that all of us—as represented by the government—borrow from some of us—as represented by bond purchasers—does not change the other essential fact that we, the people within this country, must actually produce practically all the war materials we are to have for use in the war.

It would seem to follow from the foregoing analysis that the third is the only alternative open to us; and this inevitably means that labor and capital—human energy, if you please—must be shifted from the places that do not count to the places that do count in the task we are undertaking. It means that capital and labor now being employed in building machinery, factories, etc., that are not required

[1] Imports have been paid for by England in three ways: first, by exporting gold ($1,400,000,000); second, by reselling securities ($2,000,000,000); third, with credit ($2,000,000,000).

for war purposes must be transferred to the construction of factories and workshops that can be used in manufacturing munitions and materials of war; it means that factories already built that are now being used for the manufacture of dispensable commodities, luxuries, etc., must be (where possible) made over into factories that can manufacture indispensables; it means that where these factories cannot be remodeled for war purposes they must be closed, and the laborers, at least, released for service that counts.

We have been discussing the need of curtailing luxuries in order[1] that additional war supplies may be produced. It remains to consider the relation of a curtailment of luxuries to an increased production of necessities. We have all been urged to economize with certain forms of food in order that more may be left for shipment to our Allies. The food problem, however, goes much deeper than conserving the use of an existing stock of foodstuffs. The real food problem is how to secure a supply of food large enough to meet the continuous requirements of this nation and our Allies. This is more a question of production than of consumption, that is to say, conservation in consumption is less important than large production.

Why is it that the food supply of the allied nations is short? It is mainly because of the diversion of man power from agricultural to war pursuits. To overcome this shortage in agricultural production additional labor must be found for agriculture, and this labor can come only through a release of those engaged in less essential lines of production. In other words, it is imperative that less essential lines of production be eliminated, not only to the end that the munitions and materials necessary for fighting may be abundant, but in order that the armies of the allied nations may be adequately fed and that the civilian population may have sufficient food to sustain themselves in a state of physical efficiency for the work that must be done behind the lines. This applies not merely to the production of food; it applies equally to the other fundamental necessities of life.

As an ever-increasing percentage of our man power is drawn overseas, the problem of producing adequate amounts of essentials becomes increasingly severe. There is no possible escape from a substantial shortage of the necessities of life other than through a

[1] The following is from *The Duty of the Consumer in War Time*, a pamphlet distributed by the Union League Club of Chicago, August, 1918.

diversion of productive energy from the nonessential to the essential industries.

It is not usually understood that the chief cause of the enormously high prices of the necessities of life at the present time is their relative scarcity. The supply of necessities in this country has not materially increased, but the demand for them, owing to the requirements of our Allies, has enormously increased. We can prevent a still further soaring of prices only by increased production of necessities—increased production to be accomplished, let it be repeated, through a diversion of productive power from the nonessential lines.

The wealthy have often been urged since the war started to spend lavishly on luxuries and to economize on necessities in order that the necessities will remain for consumption by the poor. This is sheer shortsightedness; for the energy devoted to the production of luxuries for consumption by the wealthy would, if diverted to the production of essentials, give us a sufficient supply of the necessities of life that all might have them in relative abundance. The result of a policy of spending lavishly on luxuries is an inadequate production of necessities and hence prices so high as to cause real privation among the masses. Those engaged in producing luxuries obviously cannot at the same time be engaged in producing necessities.

The importance of maintaining an adequate production of the necessities of life and of preventing an enormous rise of prices cannot be too strongly emphasized. In a war of attrition such as this, physical deterioration of the masses of society in consequence of inadequate nourishment results in a serious decline in national morale —and this is a decisive factor in the final outcome of the struggle. *Food and other physical necessities will win the war.* We must therefore not only conserve food and other necessities, but, more important, we must insure ample production of them through a lessening of the production of nonessentials.

3. THE SIZE OF THE JOB[1]

This war is the biggest job America ever faced, or is ever likely to face. It is a job so big that none of us has walked around and meas-

[1] By Frank A. Vanderlip. Adapted from an address entitled "How to Win the War," delivered before the Business Men's Association of Minneapolis, Minn., in December, 1917.

Ed. Note.—Mr. Vanderlip, president of the National City Bank of New York, is chairman of the National War Savings Committee.

ured it. We have only got some little views of the mountain that is ahead of us. We are just beginning to understand what it means to go to war in the modern sense and what it means to prepare America for war.

We knew we were unprepared. I don't know whether we knew how thoroughly unprepared we were. Our unpreparedness was complete. But when we come to make an inventory of what is necessary; when we come to understand what a gigantic task it is to equip an army; when we come to know something about modern warfare and understand that it is a matter of equipment as much as it is of men; then we begin to see something of the size of this undertaking.

We are apt to measure things with the yardstick of the dollar—this money value of things. We have seen Congress appropriate for expenditure this fiscal year nineteen billion dollars. Do you know what a billion dollars is? I don't. I have been used to handling million dollar units a good deal. We know what a million dollars is pretty well. We can picture what sort of a building, how much of a shop, what kind of a store a million dollars represents. But we cannot as yet adequately measure a billion dollars. And we are to raise $19,000,000,000. Nineteen billion dollars! It would make a ring of twenty-dollar gold pieces around the Equator, one lying next to the other. It is three times all the money there is in the United States. Every dollar that this government has spent from its foundation, down through all the wars, through all the days of peace, all it has spent for pensions, for the Panama Canal, for constructing public buildings—every expenditure that it has made from the first days of Alexander Hamilton in the Treasury down to the beginning of this fiscal year—foots twenty-six billion three hundred million, and now we are going to spend nineteen billion dollars in a year! The value of all the railroads in the country—tracks, terminals, equipment, locomotives, cars, everything—is less than nineteen billion dollars. What would you think if we had to reproduce the railroad system of America in a year? It would be something of a job, wouldn't it?

This brings us to the question: What can organized industry do? How big is the industrial plant of this country? Three years ago, the year the great war began, the Census Department undertook to find out just what the value of the manufactured products of America was, and they found that they were worth for that year $24,300,000,000.

This year they would be worth a good deal more. We have grown; we have expanded our industries; we are working harder; more men are at work; prices are higher. But suppose that figure is $30,000,000,000 or $35,000,000,000. Put in juxtaposition with whatever figure you may set as the capacity of the workshops this demand for $19,000,000,000 worth of things, and what will your conclusion be? It will be that the government is going to fail to do its job, or you and I are going to call on the workshops for less than we have been calling upon them for.

That is no theory; it is the inevitable conclusion from two facts: our capacity and this demand. If we are going to continue to call on labor, to call on the supply of raw material, to take up shop room, to make those things that we have been in the habit of asking for; if we are going to continue to demand the things of luxury, of comfort, of convenience that we have been in the habit of demanding, the government is going to fail to do this job, and you and I are going to paralyze the blow when the government comes to strike it, because it will not have equipped this army; it will not have equipped it as it should.

Now that view makes the thing pretty personal. It begins to show us that we have some relation to this job; that the government is not a thing apart that votes war, that sells bonds, and that fights the battle out. This is a democracy. We are part of that government, and never before was it so clear that the responsibilities of citizenship come directly to us and demand of us sacrifice; demand of us that we so handle our personal affairs that we do not get in the way of the government; that we do not become competitors with the government for those things that the government must have.

We must think constantly what is the government's job; we must recognize how big that job is, how enormous it is compared with the capacity of our workshops. We want to build a billion dollars' worth of aëroplanes. We want to spend two billion dollars on ships. We have appropriated one billion eight hundred millions for ammunition. Why, in this war, which will be one in which the transportation is done in the main by automobile trucks, we have ordered 136,000 horse-drawn vehicles. That would make a procession eight hundred miles long. All this gives just a little glimpse of the endless things we have to do. It gives us a little conception of the draft we are going to make upon man power, upon raw materials, upon the workshops, upon the organized industry of the country.

4. THE DIVERSION OF ENERGY REQUIRED[1]

All the great problems of supply—man power, coal, ships, food, and what not—can find a genuine solution only in a consciously formulated policy of diversion. Despite the conclusive proof which England and France have alike offered, that war, which is the most unusual of all businesses, can be carried on only if its requirements are made the dominant end of the industrial process, some well-meaning individuals still persist in the notion that business may be carried on as usual. They seem to think that in addition to the large and conglomerate volume of the good things of life which will allow luxury as usual and pleasure as usual, an additional supply can in some magical way be conjured up to meet the requirements of the armed forces. It is argued that the stimulus of war enables the productive system to increase its output by taking up the "slack." In support of their belief perhaps it can be said that there have long been, and still exist, abundant opportunities of increasing production by the use of new lands, new technique, new organization, new governmental supervision, and the added labor of those who once lived in idleness. While it must be admitted that war has taught the people of Europe many things about efficiency which five years ago seemed beyond their grasp, it has given no evidence of being able to add to the ordinary total production materials of war which constitute fully a 35 per cent addition to the volume of goods turned out.

Most of slack in our industrial system was taken up by the immediate stimulus of the European war in 1914 and 1915. It must also be remembered that efficiency comes only with the adaptation of the system to its new ends and cannot become very manifest until this process is well under way. Our recent experiences in the production of aircraft and ships, although based upon sound enough business principles as applied to peace conditions, can be characterized as dismal industrial failures. They are evidence of the waste which is a persistent, perhaps an inevitable, accompaniment of an entrance into large-scale warfare by a nation of amateurs in knowledge of industrial society. The experimentation which is necessary to learning how to do the great tasks of war carries with it many such wastes. Many other wastes incident to the withdrawal of men and materials from industry have been recounted in the pages above and require no repetition here. In view of these conditions it seems fairly safe to

[1] An editorial.

say that war decreases rather than increases the total output of a nation. Certainly there is little evidence for a belief in a rising total output in a nation in which the industrial system has been organized to respond to public demand through the agency of a scheme of prices. But even if, in spite of losses and disorganization, production is to increase, this can come only after an adjustment to the new conditions is complete, and even then it promises at most an addition of only a small part to the total product of the country out of which must come the great supplies of a modern belligerent enterprise.

The general surplus of supplies which a civilian population must produce over and above its requirements, of which the food surplus is a single case, can be secured only by a policy of diversion. Since the resources in land, capital, and labor, under a given organization and technique, are limited and tend to be decreased, new supplies can be had only at the expense of old ones. This diversion of economic resources to national purposes may be either direct or indirect. It is direct when consumers give up goods which immediately satisfy military demands, as for example bread which can be used to feed soldiers. It is less direct when the public abstains from purchasing an article which cannot be used, but the materials out of which it is made can be used to produce a different article adapted to war uses. A case in point is that of automobiles, the materials of which can be converted into army trucks. The diversion is even more indirect when it occurs at an even earlier stage of the productive process, as for example when steel is diverted from structural uses in bridges and skyscrapers to submarine destroyers. From this it is evident that at earlier stages of the industrial process the limited amount of labor, machines, and other productive resources is more fluid, and therefore more easily diverted, than at the later stages. For a short war, to be fought upon a small scale, sufficient materials may be got by a diversion to war uses of goods which are intended for ordinary consumption. For a longer one requiring larger operations this source will be insufficient, and it will be necessary to go farther back and force unfinished goods into forms adapted to military ends. For a modern war of the first magnitude goods cannot be obtained in sufficient quantities and many goods cannot be got at all unless productive energy is diverted to new uses at an early stage of the productive process when it is still unspecialized and fluid. It is necessary to add that because our productive processes are long ones the adaptation of the industrial system as a whole to the demands of war requires a carefully thought-out plan and no little time for its execution.

Thus far we have relied quite largely for the diversion necessary to an adequate supply of war materials upon voluntary effort, while the enemy has used compulsion and definite design to divert productive resources to predetermined ends. To solve our problem adequately productive materials in their earlier and more fluid forms must by governmental order be turned to the production of war materials. In this case consumption can be restricted by the sheer inability of consumers to purchase the unnecessary articles with which they have hitherto loaded down their productive budgets. Failing such compulsion a rigid moral effort, directed by intelligence and not by emotion must be relied upon for a reduction of our consumption of the comforts and vanities of life. If by this latter means their market is taken away, producers will be forced to devote their resources to national uses.

Thus the diversion of productive resources to public ends requires of each of us a voluntary or compulsory rearrangement of individual and household budgets and radical changes in the habits of our lives. We must encourage direct diversion by reducing to a minimum our consumption of articles which can be used by our soldiers. But it is even more important that we give up the consumption of non-essential things in order that the productive energy which they embody be devoted to the accomplishment of the purpose in hand. The amount which we are forced to give up or voluntarily surrender constitutes a surplus over private consumption that measures the extent of our ability to wage war. We are fighting a nation which continues to be willing to reduce private consumption to the barest subsistence minimum. Unless a large surplus is produced we can gain no active participation in war and cannot hope for a victorious peace. The larger the surplus the shorter the war will be, and the nearer we are to victory.

XVII. Methods of Industrial Mobilization

1. VOLUNTARY ENLISTMENT OF FACTORIES[1]

The most usual method of industrial mobilization is by means of what may be called the voluntary enlistment of factories in the production of war supplies. This is induced on the part of the government by means of an offer of high prices and large profits. This has sometimes been called the financial method of readjustment, because it involves the use of money as a medium for effecting the necessary readjustments.

[1] By Harold G. Moulton. From "Industrial Conscription" (see p. 168).

The precise rôle that money plays in industrial society is confusing at all times to the economic novice, and it is perhaps especially so in connection with war. Our government is to raise the first year of the war $19,000,000,000. It is to spend this vast sum in inducing people to furnish the materials that are required for military operations. These funds are to be passed through the Treasury Department in successive instalments, giving purchasing power while there, but passing, in the act of purchasing, back again into the channels of industry.[1] Money then is the means by which the government is enabled to buy the things it needs.

While the process thus far is perhaps generally enough understood, it is usually not so clear that if the commodities required by the government are to be found ready on the market when they are desired, the government must use the money placed in its hands in such a way as to induce capital and labor to be shifted into the production of the supplies and materials demanded.

Let us take some concrete examples. X, a manufacturer of automobiles, is offered a contract by the government to produce motor trucks for army service. If the price offered is attractive, and if the factory can be easily adapted to the manufacture of motor trucks, the manager will usually readily accept the government contract. Here we have a diversion of energy without great difficulty and without having to pay enormously high prices to accomplish it. But let us take a different case. Y is engaged in the manufacture of candy, or perfumery, or beer, or ceramics. The government seeks to induce Y's concern to manufacture war supplies. To do so would require extensive rehabilitation of plant if not indeed new factories altogether. Will Y change the character of his business? Purchasers of candy, perfumery, beer, and ceramics engage in direct competition with the government and seek to induce Y to continue his present business, by demanding the usual output of such commodities. The government must here greatly outbid private spenders if it is to secure the production of war supplies.

In this connection it must be borne in mind that the government is not a very effective competitor for either labor or capital—it must

[1] There is much apparent mystery as to how the government can raise $10,000,000,000 when there are only $5,000,000,000 in the country. One way obviously is by having, say, $500,000,000 pass through the Treasury Department 38 times, or once a week for 38 weeks. In fact, however, actual gold or actual money is not used; credit instruments in the form of checks and drafts will be the means of making payments.

pay much higher returns than normal industry if it is to attract the requisite production. Why? Because the laborer does not usually feel the call of patriotism or the lure of adventure except when he contemplates entering the active military establishment. The pecuniary motive alone must generally be looked to as the means of inducing him to enter the industrial army of the government. He will not often voluntarily leave his position and apply for one in munitions factories at the same wages, because of the costs incident to transferring to a new (and often distant) employment, and because of the ephemeral nature of the demand for war materials. Very high wages are therefore required if he is to be tempted.

Similarly, the government must pay very high prices for the materials supplied if the capitalist is to be tempted into new and uncertain fields. Can he get efficient laborers for this work? How high wages will he have to pay? How long will the war last? These are but a few of the questions the industrial manager has to ask and answer as best he may. Generally speaking, he will assume the speculative risks involved if the financial inducements are high enough, but not otherwise.

It should be observed in this connection that the government's inducement must be high enough to cover all costs incident to the transition into the war business, the losses due to high cost of operation while engaged in the manufacture of war supplies, and finally the losses incident to the transition back to peace-time industry in the period of reconstruction at the close of the war. Now there may be a few who would volunteer under these circumstances; but the general tendency in any event would be to delay as long as possible, to delay perchance too long to be of any assistance in the prosecution of the war.

It should be observed, however, that this method eventually results in a readjustment of business to war requirements. It is largely accomplished by a negative process—as a result of declining profits from normal operations, caused by a curtailment of consumptive demand. There are several reasons for this retrenchment in consumption. In the first place, the perfect barrage fire of argument as to the necessity of saving which has been hurled at the American public in recent months is bearing fruit. It is now [June, 1918] regarded as unpatriotic not to save as never before in our history.

In the second place, it is impossible for the rank and file of the American people to buy Liberty Bonds and spend as usual. If they buy bonds it must be at the sacrifice of accustomed luxuries. Moreover,

we are now looking forward to the payment of taxes, and we are making our preparations for this by economizing in our normal purchases. It must be borne in mind in this connection also that at a time when the future is so uncertain a great many people are saying, "I had better save all I can now, because there is no telling whether it will be possible for me to save anything in the next few years."

Finally, it must be noted that the rapid rise of prices in nearly every line eventually forces rigid economy among the masses. Statistics published by the government early in 1918 show that retail prices of foodstuffs in the United States are now 57 per cent higher than they were in 1914, while general wholesale prices are 81 per cent higher. Students of the question are unanimous in the belief that prices will continue to rise here throughout the war, just as they have in the nations of Europe. It will therefore shortly be impossible for the masses of our people to devote much of their earnings to the purchase of nonessentials. They will count themselves fortunate if they are able to purchase enough of the necessities of life to sustain themselves in a state of normal efficiency. Already in many cases the pinch of war prices is beginning to mean real privation.

These forces, however, do not for several years result in a complete shifting of productive energy from nonessential lines. The chief reason for this is that the laboring classes, who as a result of the war receive unprecedentedly high wages, are unable to resist the temptation to spend their new-found wealth for the luxuries and comforts of life, which have so long been denied them. This excess of purchasing power in the hands of the "rich war laborers" has had a striking manifestation in England; and it began to develop rapidly in the United States in the year 1918. A complete readjustment of industry can be rapidly accomplished, therefore, only by the exercise of some form of coercion on the side of production, such as the exercise of priority rulings or conscription of the use of industrial establishments.

2. VOLUNTARY INDUSTRIAL MOBILIZATION OF LABOR[1]

In our industrial system the standard mechanism for inducing laborers to move is that of an offer of higher wages. This offer was readily forthcoming from the contractors in war industries, particularly from those who held "cost-plus-percentage" contracts, which

[1] By L. C. Marshall. Adapted from "The War Labor Program and Its Administration," *Journal of Political Economy*, XXVI (1918), 425–60.

Ed. Note.—Mr. Marshall is dean of the School of Commerce and Administration, University of Chicago; now Chief of the Section on Industrial Relations of the Emergency Fleet Corporation.

made it actually to the profit of the employer to pay high wages for his workers. War contractors "bid away" from ordinary industries their skilled workers, disrupting in so doing some of the basic industries of the country, and then bid against each other for these workers. The lack of general planning, or indeed of general knowledge of the turn events were taking, caused wages to rise very irregularly in the various trades affected, in the various communities affected, and even in the different industrial plants within a given community.

The competitive bidding of the various contractors was accentuated by their firm belief that there was a scarcity of labor, particularly of skilled labor. It is not surprising that this belief should have been prevalent. There was undoubtedly a scarcity of certain kinds of skilled labor; there was a scarcity of many kinds of skilled labor in the congested districts; and the story of England's difficulties in providing skilled labor had been widely circulated. One feature of our situation was very generally overlooked. The scarcity of shipping made our problem very different from that of England. The actual situation is that, conceding scarcity of certain kinds of labor and of many kinds of labor in certain districts and of maladjustment of labor supply in many districts, there is no real scarcity of labor, taking the country as a whole [April, 1918].

To this hectic wage situation there was added the fact that we did not have a satisfactory system of employment exchanges through whose activities the movement of workers could take place in an orderly fashion according to carefully determined requirements. The result was that the movement occurred in a highly disorderly manner, guided, if such a term may be used, by newspaper advertisements of private industries, by wild rumors of high wages in some distant locality, and by the patriotic desire of the individual worker to be of service. A plant manager in one of these war-industry towns said that "for weeks laborers milled around like cattle" in his town. The story is told of one community in which an investigator met incoming trains and watched workers accept employment in as many as six to ten plants in the same day, moving from one to the other in the hope of ever-higher wages and accepting employment in every one whose wage offer was larger than that of its predecessor.[1]

[1] High wages are alleged to have contributed to the demoralization of labor in another way. Reports are numerous that workers stayed away from their tasks some days of the week because the high wages enabled them to make what they regarded as a satisfactory living by working the other days. One plant reported that it had to maintain a pay-roll of 10,000 in order to have an average of 9,000 report for work each morning.

There is, of course, no such thing as a "normal" labor turnover. Some writers have estimated that a labor turnover of 100 per cent per year represents average conditions. In these war industry plants a labor turnover of 400 or 500 per cent was regarded low, and one of 1,600 to 2,000 per cent was by no means phenomenal.

3. INDUSTRIAL CONSEQUENCES OF VOLUNTARY ARMY RECRUITING[1]

Voluntary recruiting is not merely unjust; it is harmful in its outcome. It is the injustice which causes the obvious and immediate difficulty. For instance, for young bachelors of twenty and twenty-five to remain peacefully smoking their cigarettes in the streets whilst heads of families are risking death is evidently unjust; but it also involves extra expense to the state, for every unmarried soldier costs only eighteen pence a day and his keep, whilst in the case of each married volunteer a wife and almost always several children must be provided for. It was calculated in the month of August that three men who had enlisted in London on the same day were leaving altogether twenty-six persons to be supported by the state. Not only, then, for a moral reason should compulsory service, if established, be enforced first of all on bachelors. The voluntary system has other defects still more injurious to the successful conduct of the war. Not only is the number of recruits smaller than it might be, but who can foretell what this number will be to-morrow, or six months hence? It is impossible to estimate and prepare the necessary equipment and the adequate lists of instructors and officers; this became clear in the first months of the war. Such was the sudden rush of volunteers, that for lack of enough buildings, uniforms, guns, and instructors many had to be refused. The men were discouraged; the idea spread that no more men were wanted, and the next appeal met with a poor response; it was necessary to resort to new propaganda. Then there was another difficulty leading to another kind of confusion. A man would often enlist for a particular corps or a particular service only. A chief engineer, priceless in the workshop, would insist on going to the firing line; an unskilled mechanic would prefer to serve at home in a factory. Finally, for lack of the numbers of fighting men which

[1] By André Chevrillon. Adapted from *England and the War*, pp. 197–99. Copyright by Doubleday, Page & Co., Garden City, New York, 1917.

Ed. Note.—M. Chevrillon is an eminent French writer. This volume was printed in England with a preface by Rudyard Kipling.

conscription would give, the state, as the war extends and the need of soldiers increases, ends by taking all who offer themselves, even boys and weaklings, who quickly sink to the hospital and are finally dismissed. Time was required to reveal all these defects, some of them clearly immoral, of a system which owes all its prestige to its appearance of superior morality and the force of tradition.[1]

4. SELECTIVE MILITARY CONSCRIPTION[2]

One form of mobilizing the labor resources of the country for war production is through the negative process of selecting the men for the Army with full regard to the needs of industry. In July, 1918, this problem had assumed so definite a shape in the United States that the *Chicago Daily News* writes editorially as follows:

Mr. Baker says that from within the present draft age he can get all the soldiers he needs between now and the first of next January. Yes. But can he get them without taking them from factories and from farms whose output is fundamentally essential to the conduct of the war? Can he get them without crippling and slowing the war?

There are multitudes of idle unmarried men above the present draft age. Some of them are idle in the ordinary complete sense—they are loafers. Others are idle in the technical sense—they are engaged in occupations which are injurious to the community or else they are busy with tasks (such as cooking) which could easily be performed by women. Hundreds of thousands of these men are perfectly fit for the front. Other hundreds of thousands among them are perfectly fit for service as line of communication troops. And still other hundreds of thousands are perfectly fit for non-combatant work in uniform. And they would not be missed. That is, they would not be industrially missed.

But consider the cannon industry. We are behind with cannon. At our best, according to authorized statements from Washington, we cannot get our biggest railway-mount cannon ready till next year. Any slightest removal of men from the cannon industry will simply add one more postponement to the happy and necessary day when we shall blast the Germans off the soil of France and Belgium. Mr. Baker knows this fact. He knows that when you take a man out of the cannon industry you lose days and days, and perhaps weeks, while finding another man and teaching him

[1] The selection in the next chapter entitled "The Organization of Public Opinion in England," by M. Chevrillon, should be read in conjunction with this selection—particularly the last pages describing the "compulsory voluntary" recruiting system.

[2] From the *Chicago Daily News*, July 3, 1918.

his new job. And Mr. Baker knows that certain factories in the cannon industry at this minute are lying idle for a considerable number of hours every day because of a lack of men.

Therefore, in advising Congress not to extend the present draft age Mr. Baker implicitly gives us this promise:

"From within the present draft age I will get all the soldiers needed during the next six months; and yet I will not take one man from any place where cannon are forged, or from any place where cannon are machined, or from any place where cannon carriages are built, or from any place where panoramic sights for cannon carriages are assembled, or from any place where optical glass for panoramic sights is ground, or from any place where steel for any portion of any cannon or of any cannon carriage is smelted or refined. I will leave the cannon industry whole. And I will leave the airplane industry whole. And I will leave the rifle industry, and the machine-gun industry, and the powder industry, and every other basic war industry, all absolutely whole. I ask your trust and I pledge you my word."

5. WORK OR FIGHT[1]

Every man, in the draft age at least, must work or fight.

This is not alone a war of military maneuvers. It is a deadly contest of industries and mechanics. Germany must not be thought of as merely possessing an army; we must think of her as *being* an army—an army in which every factory and loom in the Empire is a recognized part in a complete machine running night and day at terrific speed. We must make ourselves the same sort of effective machine.

We must make vast withdrawals for the Army and immediately close up the ranks of industry behind the gap with an accelerating production of every useful thing in necessary measure. How is this to be done? The answer is plain. The first step toward the solution of the difficulty is to prohibit engagement by able-bodied men in the field of hurtful employment, idleness, or ineffectual employment, and thus induce and persuade the vast wasted excess into useful fields.

One of the unanswerable criticisms of the draft has been that it takes men from the farms and from all useful employments and marches them past crowds of idlers and loafers away to the Army. The remedy is simple—to couple the industrial basis with other grounds for exemption and to require that any man pleading exemption on any ground shall show that he is contributing effectively to the industrial welfare of the nation.

[1] By General Crowder.

6. THE PRIORITY METHOD[1]

Priority must be accorded to the services of war. When an army is to be moved all means of transport in sight are commandeered. When an army is to be fed, civilians protest in vain against the seizure of stores. So matters have stood since time immemorial. This is why it now seems merely common sense to enact a law giving the president authority to claim priority in the transportation of goods essential to the prosecution of the war. Whether the output of steel mills shall be assigned to the building of war ships, merchant ships, railways, office buildings, or summer hotels, should, we all feel, be determined by a like principle of priority. If we have as yet no law guaranteeing priority for military requirements in the field of production, we feel that this is merely a gap in our war arrangements, to be stopped for the present by patriotic action on the part of the producers themselves.

What is novel in the present-day conception of priority is its breadth of scope. When the whole industry of a nation is mobilized behind the fighting line, it is not merely finished munitions that must be given priority in transportation, but also the materials and fuel for further munitions production. The food supply of the industrial population, as well as that of the army, has a claim to priority. So also have clothing supplies, lumber for housing, and whatever else is essential to working efficiency. In production it would be impossible to fix definite limits upon the application of the priority principle. We can not much longer permit the free flotation of the securities of foreign enterprises, nor even of the less essential domestic enterprises, so long as national loans or issues designed to finance railways or industrial enterprises of prime necessity are to be floated. Modern warfare, in involving the whole national life, has made inevitable a control of business practically coextensive with the economic system.

The application of the priority principle to transportation and production is quite in accord with plain common sense. It is none the less revolutionary in its social economic implications. What it means is that necessities shall have right of way. If we have excess productive capacity, the unessentials and luxuries may be provided, but not otherwise. And necessities are definable in terms that take account only of physical requirements. There is no room in the definition for class distinctions. A new country house may seem a matter of necessity to the man of fortune, but he will persuade no

[1] By Alvin Johnson (see p. 43). Adapted from "What Priority Means," *The New Republic* (June 30, 1917), p. 237.

priority board to permit shipment of building materials while cars are needed for coal or wheat. Nor will he persuade them to let him have lumber that could be used for ships or workingmen's camps, or labor that could be employed to advantage in production for more clearly national and democratic needs.

7. INDUSTRIAL CONSCRIPTION FOR WAR SERVICE[1]

By industrial conscription the government could transfer laborers from the industries that are unimportant to the fields of production that are imperatively necessary as rapidly as is required, without waiting, possibly indefinitely, for public economizing to force readjustment through the decline of profits and the closing of factory doors. Industrial establishments engaged in manufacturing commodities that are unnecessary for war purposes could by industrial conscription be forced to convert themselves at once into factories for the manufacture of munitions and other war materials. New construction that is not necessary for war purposes could be halted and the energy engaged therein diverted to the channels where imperatively demanded. Such a system would reduce to a minimum the social loss of time and energy incident to the transition period. *Wisely administered* (note the qualification) upon a basis of what may be called selective industrial conscription it would eliminate a great part of the confusion, disruption, and maladjustment incident to the ordinary financial method of readjustment.

Not only are the social losses involved in the transition less than under the method of gradual readjustment, but the direct losses to capitalists are almost certain to be less. Assume that *time* permits a gradual transition covering a period of two or three years. Would the losses through gradual readjustment by means of the financial machinery be less than through direct commandeering? The former method means vainly struggling along in present lines with lower margins of profits and heavy losses as reduced sales gradually develop; it is likely to mean with any given establishment months of loss before bankruptcy and then a considerable interval of no business at all while attempting to fit itself into newer lines of production. Only in cases where the rehabilitation of factories is a simple process can the conversion be made without heavy losses. Even in these cases, however, the tendency will be to delay the fatal step as long as possible, and this means until the pinch of declining profits is no longer tolerable. Under the method of industrial conscription, however, the

[1] By Harold G. Moulton. From "Industrial Conscription" (see p. 180).

conversion could be forced before the decline in profits threatens insolvency. And, moreover, the losses attending the entrance into the new lines of industry could be reduced to a minimum by directing capital to the places of greatest need. It is a method, substantially speaking, of carefully planned adjustment by a board of experts acquainted with the entire situation, as against the slow and uncertain method of trial and error by business men who hope and believe that business will continue as usual, and who, when eventually forced from present lines of activity, find themselves only partially or inaccurately acquainted with the government's requirements.

But aside from all this it must be emphasized that the method of industrial conscription saves what is at present more precious than gold itself—it saves time. If selective conscription of men may be justified on the ground that the volunteer system is hopelessly slow and uncertain where speed and certainty are indispensable, may not conscription of industry be justified on the same grounds? If ships, munitions, and food rather than soldiers are to render our greatest service to our Allies, why resort to the method of efficiency in the raising of armies and the method of inefficiency and uncertainty in the raising of crops and supplies?

Shall we answer, Because conscription of industry is un-American, because it places autocratic power in the hands of a democratic government and strikes at the very foundation of our institutions—private property, vested interests, free initiative, individual liberty, competition, and all the rest? A similar answer may be, and has been, made with reference to military conscription, but we have overruled the objection there mainly on the ground that the time element is so tremendously important that ordinary peace-time principles and ideals have to give way. Much as we may dislike the principle and method of conscription, do we not dislike and fear the alternative—the indefinite eclipse of democratic institutions—more?

In one important respect industrial conscription is incomparably less objectionable than military conscription. The man who is compelled to serve in the army is forced to offer life itself in the cause for which he is enlisted; the man who is compelled to close his factory or convert it to different uses, the man who, as a laborer, is compelled to change his employment, at best offers but his services for a smaller remuneration. It is the old question of life versus property. The nation which protests and believes that there is *all* difference between a prize court and a submarine—between temporary detention of our ships and their cargo with legally determined compensation after the

war and the sinking of our ships and citizens without a warning—can make so far as justice is concerned only one decision on the question of industrial versus military conscription.

The method of industrial conscription obviously raises enormous problems of its own. How shall we provide the machinery necessary to its successful administration? Who shall be given the power to decree life or death for industrial establishments in the exercise of the selective requirements of the plan? Who shall decide what industries are important to keep alive in war time—for recreational and cultural purposes as well as for physical and military requirements? What man or what body of men can be found with the necessary omniscience, with the requisite prevision, for such a method of industrial reorganization? I have spoken of a board of experts, but a friend of mine remarks: "We may call them experts but that does not make them really expert; they would be sure to make no end of mistakes; they are not in a position to determine in anything approaching a scientific manner what lines of human endeavor count for most." That there is point to such contentions in piping times of peace I would be the last to deny, but in time of war the problem is profoundly changed. An administrative board giving its entire time to the study of the situation could, it seems to me, determine and guide with considerable wisdom the apportionment of our national energy. The insistent demands of the War Department for ships, for munitions, for supplies furnishes abundant evidence of the things that are needed most; the demand side of the problem certainly has no insuperable obstacles. The determination of what particular commodities shall be dispensed with is perhaps not so simple a task. But could not any of us upon reflection think of a score of commodities that are less important for war purposes than shells, than food, than shovels, than airships? We need not look for 100 per cent efficiency in order to justify the effort. Any percentage of efficiency would be a net gain over the present method of sheer inefficiency.

XVIII. Lessons from European Experience

I. FRANCE'S INDUSTRIAL SITUATION IN THE AUTUMN OF 1914[1]

The first effect of the war was almost a complete disorganization of French industry. Labor was suddenly taken away from the

[1] By Raoul Blanchard. Adapted from "The Revival of Industry in France," in *North American Review*, CCVI (July, 1917), 50.

Ed. Note.—Mr. Blanchard is a French exchange professor at Harvard University.

quarries, limekilns, cement-works, paper-mills, iron-works. The gravity of the labor situation may be seen when it is understood that the labor supply was reduced by about three-fourths by the call to the colors of all able workingmen from the age of nineteen to forty-five. The paralysis lasted during all the months of August and September, 1914, and the revival of trade was very slow until the beginning of 1915.

However, it did not take a very long time to discover that this stoppage of all work was a tremendous mistake. The consumption of ammunition and war material is so great in modern battles that even in the supposition of a short war the production of France was not adequate to the demand. That the war would be long began to appear inevitable to the most clear-sighted people during the winter of 1914–15. It was necessary to set about the manufacture of arms, ammunition, and war supplies. The need was much more pressing, as the coal and iron regions of France were for the greater part occupied by the enemy. On the other hand, this supposition of a war of considerable duration imposed upon the country the obligation of making the most of all its resources, since it needed still greater revenue to buy supplies in large quantities from foreign nations. The manufacturers had before them the task of resuming their industries and increasing their output.

The most pressing duty was of course the manufacture of products necessary for national defense. These are various, and the southeast, to take one district for example, could produce a good many of them. Though the region is not supplied with material for heavy iron-works and could not manufacture guns, it was at least possible to work on shells and grenades, to manufacture explosives, to prepare cotton for powder, to produce timber and cement for the trenches, stocks for rifles, and many other utilities. At the same time an attempt was made to restore the activities of paper-mills and to give an impulse to glove-making and silk-manufacture.

The difficulties, as may well be understood, were enormous. Everything was lacking; labor, coal, raw material, and transportation services were utterly disorganized. Thus passed several anxious weeks. Little by little these problems were studied and solved with the help of a new administrative organization, the "Sous-secrétariat d'État de l'Artillerie," which became later the "Ministère de l'Armement." Each particular problem was solved by the most practical means, the power of the state being now a help, and not a hindrance, to private initiative.

Various schemes were devised to answer the needs of the moment. The first was to take men out of the army and send them to industrial work. This was done with great caution during the winter of 1914–15. The proportion of the men thus taken increased more and more during the year 1915 and reached its fullest extent in 1916. The specialists in steel work were the first to be taken out of the trenches; these were far from being sufficient, and common workmen were added to them. Then chemists and workmen trained in the manufacture of explosives were recalled; electric engineers were sent back to the hydro-electric plants; miners above thirty-five years of age who belonged to the territorial regiments were sent to the mines; paper-makers and card-board-makers who could be employed in the preparation of explosives were put to work; cabinet-makers were put to manufacturing rifle stocks; wood-cutters were brought back from the front in order to see that there was no waste in providing the enormous amount of wood needed in the army. All this recalling of mobilized men was effected at first according to the need, and without method. By degrees it became clear that the output would be greater if these soldier-workmen were assigned to the plants or factories where they were working before the war. As it would have been unwise to take too large a number of men out of the fighting units, hundreds of thousands were taken from the auxiliary troops of the interior, men who through lack of physical ability to fight were employed in sedentary tasks. Thus in 1915 and 1916 auxiliaries were swept away to become workmen, foremen, secretaries, bookkeepers, accountants, etc. Finally the administration decided to draw from the oldest classes of men still under the military law. These were called in 1915 and sent to the factories—men born in 1868, either bachelors or married men without children.

Another draft was made on the civil population. To make up for the absence of male help, women were called upon for a great number of occupations. Along with the women the refugees were to do their part. After a rather long period of unsettled life these refugees took again to regular occupations, some working in the fields as agricultural hands, others in factories. Today it is difficult to find unemployed people among them.

The alien population for France is also large, considerable numbers of Italians, Spaniards, and Portuguese being employed in the south-eastern region. A newer element was provided by natives from French colonies, namely, Morocco and Algeria. Since the war

started, large numbers of Greeks and Armenians have been imported to France, and during the last two years something like 200,000 Chinese have been brought to France for unskilled work.

The last resource was the enemy itself. There are in France more than 250,000 German prisoners engaged in various work and receiving a salary for it. The largest number are engaged in agricultural work, but a good many gave themselves willingly to manufacturing which was not directly connected with national defence. In the southeast they are building hydro-electric plants, working on the railway tracks or on the roads, or employed anywhere as ordinary workmen. Thus by these various means the difficult problem of labor has been solved.

2. INDUSTRIAL MOBILIZATION IN ENGLAND[1]

We discovered to our surprise at the beginning of the war that war apparently meant prosperity and not poverty. The huge governmental expenditures and the loans and taxation which they caused resulted in an enormous redistribution of wealth. Wages advanced, and millions found that they had more money than they had ever had before. The result was that consumption actually tended to go up among the poorer classes, and labor and materials vitally required for war purposes were diverted to meeting these new demands. It was some time before our government realized the disastrous nature of this tendency, and it was long before the whole of the people realized that though an individual may be able to afford to be a spendthrift in war time, a nation cannot afford that he shall be. To put industry on a war footing, so that the nation should produce what is required for war and as much of it as possible, required drastic measures on the part of our government.

Perhaps the simplest way of explaining why such measures were required is to try to give some idea of our national production and consumption in normal times and show how it has been affected by the war. Most figures of national production and consumption are unreliable, but the English figures, though somewhat out of date, happen to be fairly reliable, as they are the result of a searching

[1] By R. H. Brand. Adapted from an unpublished address before the American Bankers Association, September, 1917.

Ed. Note.—Mr. Brand was vice-chairman of the British War Mission to the United States.

investigation by a Royal Commission on the Census of Production some years ago. The figures I give are for the year 1907. No doubt by the year 1914 they had been very much increased and have changed still more since, but they will serve as an illustration of my argument:

In 1907 the British people are estimated to have produced goods to the total amount of, roughly	$10,000,000,000
The nation consumed during that year in personal consumption	7,050,000,000
It spent on capital purposes at home:	
a) On betterment of its national plant	950,000,000
b) On maintenance of its national plant	900,000,000
It used up goods to the value of (in keeping up and probably increasing its stocks of material on hand)	325,000,000
It exported goods in the form of loans to foreign countries of about	500,000,000

making up in all the $10,000,000,000 that it actually produced. By 1914 probably its income had increased to at least $12,500,000,000, and the surplus of goods which it had over to export as loans to foreign countries seems to have increased from about $500,000,000 to $1,000,000,000.

What happens then in war time? First of all there was an enormous and growing demand for materials of all kinds for war consumption, either in the form of guns, or shells, or military clothing, or food, or motor trucks, or aëroplanes, or any of the hundred and one items of military equipment, and not only for ourselves but for our Allies.

How was that demand met? It is obvious from the figures given above that there must be great changes either in production or consumption, or there would be no materials at all for war purposes, because they are normally all used up in other directions, and in fact 7/10 of what we produced in the year 1907 was immediately used up again in the form of personal consumption by the people. It is clear we must either have increased our production of goods, or reduced our consumption, or, lastly, bought more goods from foreign countries by selling them our liquid capital assets.

Let us consider first how we can have reduced our consumption. It must have been in one or all, no doubt all, of the following ways:

1. By cutting off altogether our normal peace loans to foreign countries, i.e., in 1914, $1,000,000,000.

2. By cutting down all normal additions to our national plant, i.e., by building no more houses, factories, railways, roads, etc., except for purely war purposes. This expenditure in 1907 amounted to about $950,000,000.

3. By cutting down and ceasing as far as possible to spend money on the maintenance of our national plant, except the minimum required to keep it running. This expenditure in 1907 amounted to $900,000,000. We have undoubtedly let our roads, railways, houses, and so forth, to some extent deteriorate.

4. And most important of all, by cutting down our civil personal expenditure. This is so far the largest item of consumption that it is here where the most important savings can be made.

By these means it is obvious that at the expense of our becoming poorer and allowing our national plant, our railways, houses, factories, etc., to deteriorate, and by strict personal economies we have been able to turn a large volume of production in the direction of war material; in other words, to devote the labor and material formerly used for the above purposes purely to war purposes.

But how about production? Has it decreased or increased? The greatest productive capacity in a nation is to be found, of course, among the men who are of fighting age. In England the total number of "occupied males" between the ages of eighteen and forty-four, i.e., roughly, the conscription age, was, in 1911, 7,200,000. The number of men from the United Kingdom in our army and navy amount to over 5,000,000; therefore, out of every seven of these men, on the average five are now soldiers or sailors. These men are lost from the productive capacity of the nation. It is obvious that if our production has remained the same, or has increased, it must have been the result of extraordinary efforts on the part of the small percentage of occupied males of fighting age left, on the part of all the other males, occupied or formerly occupied, and on the part of all females.

Notwithstanding the great difficulties, I think it is probable that our production is quite as great as before. Measured in money, and owing to the rise of prices, it would probably be much greater. This is due to the fact that the whole population, practically speaking, has been working, and working intensely. Millions of women who have not worked before are working now. No one is idle. Every acre of land or garden that can be used is being used. Methods of production

have been speeded up, labor-saving machinery in industry and agriculture multiplied. In every direction the wheels have been turning faster.

But, perhaps more important still, the *character* of our production has entirely changed—almost our entire industry is producing for war purposes. Ordinary civil needs are no longer considered. We have of course to produce what is essential for life, but beyond that all our energies are directed to war production. The government has of necessity compelled the whole of British industry to produce for war and to produce what it is told to produce, because in no other way could our own armies and our Allies have been supplied. No man is free to do what he likes with his labor and capital, with his ships, or with his steel. He has to do what he is told to do. By this means production for war purposes has enormously increased, and civil consumption has enormously decreased, because the goods for the civil population were no longer produced and one cannot buy what isn't there. Instead of gramophones, the gramophone company makes fuses; instead of cloth for ordinary clothes, the woolen factory makes khaki; instead of motor cars, the motor-car maker makes shells.

Apart from selling our liquid capital assets in return for foreign goods, and apart from borrowing from foreign countries for the same purpose, our power to provide our own army and navy with all they want and have any surplus over for our Allies has indeed depended entirely on our extraordinary efforts in production—not in normal production, but in war production—and also on the extent to which we have been able to reduce our civil consumption of all kinds. I put production first because, while economy in consumption is exceedingly important, increased productive capacity devoted to war material, in my opinion, is still more important. Our increased productivity has, as I say, been devoted entirely to war requirements. We have had to turn over our whole industry from a peace to a war basis. We have both voluntarily and compulsorily cut off the production of goods which are unnecessary for war purposes. Many trades have been actually shut down and the labor taken from them and handed over to war industries. Labor itself has been subjected to restrictions which would have been wholly impossible before the war. Labor may not leave its employment without government leave; salaries and wages may not be increased without government approval. Measures for the control of industry which were unheard of and, in fact, absolutely impossible before the war have been imposed upon all industry.

Fixed prices have been placed on the most important materials. The government now has the absolute control of the use of steel, copper, lead, wool, leather, and other materials for which the war demand is insatiable, and also of all materials manufactured therefrom. No use may be made of most of these materials for any purpose whatever without a certificate being first obtained. No buildings of any kind may be erected without leave of the Ministry of Munitions. The whole of the industry may now be said to be directed to the requirements of the government. Its regulation is an enormous task. In the head office of the Ministry of Munitions alone there are more than 10,000 people.

On the other side, partly as result of the goods required actually not being produced, and partly as result of restriction of consumption, either compulsory or voluntary, we have cut down enormously our ordinary consumption of luxuries, and are now cutting down on necessities. Both for financial reasons and owing to the pressure on tonnage caused by the submarine, the government has for long instituted an extremely drastic restriction of imports. I regret myself that these restrictions were not introduced earlier, and here is something in our experience which may be useful to the United States. Perhaps I can bring the situation clearly before you by the following comparison: Before the war, we imported for the needs of our civil population, about 55,000,000 tons of materials of all kinds each year. We are now importing about 30,000,000 tons. Of that 30,000,000, at least 10,000,000 represent munitions of war of one kind and another for our Allies as well as ourselves. The balance of 20,000,000 tons is in the main foodstuffs. Therefore, as against 55,000,000 tons before, we are now getting 20,000,000, nearly all of foodstuffs.[1]

You may think that all my insistence on our increased production and increased economy in consumption has not much bearing on the problem of financing our Allies. But in reality it has the most direct and vital bearing, and your experience in this respect will be the same as ours. We have never once, I believe, refused an Ally the necessary credit if we have been able consistently with our own demands to supply them with the goods which they wanted from our own home products. We continue now to grant them the necessary credit when we can make the goods ourselves in Great Britain. But the problem

[1] Ed. Note.—Further drastic restrictions of imports were made in the spring of 1918 in order to release shipping with which to transport American troops to France.

has been to find the labor and material to produce what they wanted as well as what we wanted. We have as a matter of fact supplied them with every variety of materials in enormous quantities. We have lent them continuously hundreds of ships at cost price, the most valuable commodity in the world. We have supplied them with coal, steel in very large quantities, with guns, rifles, ammunition, explosives, and every other kind of munitions, motor trucks, rails, railway materials, locomotives, and so on. In the year 1916 alone we supplied them, in addition to the materials quoted above, which are of course the most important for war purposes, with 9,000,000 pairs of boots, over 100,000,000 sand bags, 40,000,000 yards of jute, millions of socks and blankets, and in addition several thousand tons of leather; also cloth, foodstuffs of every kind, portable houses, tools, hospital equipment, and so forth.

We have been able to do this and to continue doing it, first of all, because our whole industry is now devoted to war purposes; secondly, because of our intensified productive energy; and thirdly, because of our economy in civil consumption. Without these efforts we might have been prepared to give our Allies the same amount of credit, but that would have been useless, because the goods they wanted would not have been there.

We have had, however, to assist our Allies, not only by supplying them with what we could produce internally, but by enabling them to purchase abroad. This has been a problem of extreme difficulty and of a character different from any that is likely to face the United States. And it is here that we have had to supplement our resources by the means I have already mentioned, namely, the sale of every liquid asset our government could lay its hands on.

We are, as you know, by no means a self-contained nation. With all our efforts we have not been able to produce all that we or our Allies have required. The demands of war are absolutely insatiable, and we have neither been able to produce the kinds of things which were required, nor have we had enough of what we could produce ourselves. Copper, for instance, we had to buy from you, and where, as in the case of steel, we produced largely ourselves, so unlimited have been our own and our Allies' demands that there also we had to buy largely from you. At home our supply to our Allies of all articles has been limited only by our productive capacity and our economy, and not by any lack of credit. Abroad it has been limited by our means of payment and by the credit we have been able to secure.

3. GERMANY'S MOBILIZATION OF NATIONAL RESOURCES

A. IN 1914[1]

On August 4, 1914, when England declared war, the terrible event which has never happened before occurred, and our country became a beleaguered fortress. Shut in by land and by sea, it was now thrown on its own resources, and war lay before us immeasurable in time and space, in danger and sacrifice. Three days after the declaration of war I could not bear the uncertainty of the position any longer, and I announced myself at the War Office, where Colonel Scheuch received me in a friendly manner. I told him that our country was provided with the necessary material of war only for a limited number of months. He agreed as to my calculation of the duration of the war, and so I put this question to him: "What is being done, what can be done, to prevent a shortage of supplies?"

The first question which met us was a question of discovery. We had to know for how many months the necessary supplies would last. On this hung every measure that we took. The reports of various industries were contradictory to the extent of 10 per cent in most cases. I was told that I could get the statistics in six months. But I had to get them in a fortnight. A daring conception, a hypothesis, was necessary, and this plan succeeded. It was assumed that the average output of German industry would be in the same proportion as in any given large group of firms. The War Office had 900 to 1,000 contractors. If we sent around inquiries to these firms and gathered what their power of production was in their various industries we should be able to arrive with some probability at the total capacity of the country. It was a question of big figures and the experiment succeeded. In a fortnight light began to come, and in three weeks we had accurate information. In a few materials the supply was more than sufficient for the war demands at that time, which have since been greatly exceeded. But in the great majority of cases it was much less.

There were four possible methods to establish industry on a firm basis and to guarantee our capacity for defense. In the first place, all

[1] By Walter Rathenau. Adapted from "German Organization at the Beginning of the War," an editorial in *Current History* (January, 1917), pp. 713 ff.

Ed. Note.—Dr. Walter Rathenau, head of the General Electric Company of Germany, was appointed at the beginning of the war to superintend the supplying of the German War Office with raw materials.

raw stuff in the country had to be put in a position that could be commandeered, and voluntary courses and private desires could not longer be consulted. Every material and every half-manufactured product had to be disposed of in such a way that nothing might be devoted to luxury or its relative needs. The flow of things had to be forcibly restricted, so that they were automatically diverted to those final products and means of manufacture which the army needed. That was the first and most difficult task.

Secondly. [Here the censor has made a complete cut.]

The third source of supply which offered itself to us was manufactures. We had to see that everything that was produced in the country was necessary and essential. We had also to see that new methods of production were discovered and developed where former technical means were insufficient.

And now for the fourth plan. We had to find a substitute for stuff that was in excessive demand in other and more easily made things. Where it was prescribed that this or that object had to be made out of copper or aluminum, it could be made out of something else. Something different had to be found, and old-fashioned methods of manufacture had to be put on a new basis.

When the old methods became troublesome, owing to the need of material, prejudice had to be broken down, and products had to be made, which was more easily done in view of our means of supply.

These were the methods which came under survey. They were not the solutions of the difficulties, but they showed the way, possible means of solution, and the hope of attaining our ends.

B. COMPULSORY CIVILIAN SERVICE, 1916[1]

The German Reichstag on December 2, 1916, adopted a compulsory civilian service bill by a vote of 235 to 19. This is the most drastic step ever undertaken by any government to mobilize all the man power of a nation by force. It represents the apotheosis of organization in war and confirms the absolute confidence of the German people in the invincibility of their organizing talent. The execution of this measure is in the hands of General Gröner, chief of the newly created Kriegsamt (War Emergency Office), who formerly was chief of the Military Railway Service.

[1] Adapted from "Germany under Civil Conscription," an editorial in *Current History* (January, 1917), pp. 710–11.

All men of the whole of Germany from sixteen to sixty are to be enrolled and controlled from one central organization called the Office of War.

General Gröner describes the organization as follows: The new War Office represents Germany as a colossal firm which includes all production of every kind and is indifferent to the kind of coat, civil or military, which its employes wear. The new measures are intended to mobilize all effective labor, whereas up to the present we have only mobilized the army and industry. The whole war is becoming more and more a question of labor, and in order to give the army a firm basis for its operations the domestic army must also be mobilized. All the labor, women's as well as men's, must be extracted from the population, so far as possible voluntarily. But if voluntary enlistment does not suffice we shall not be able to avoid the introduction of compulsion.

C. GERMANY'S "ORGANIZATION FOR VICTORY," 1916[1]

Germany is girding up her economic loins for a finish fight if necessary.

Germany is preparing for a war lasting to all eternity. We shall first double our present production of ammunition and other war material, then treble it, and so on and on until every man and every woman will be working in the defense of the Fatherland. By spring we shall be running under full steam.

The object of the new patriotic auxiliary service, as the Germans call the general mobilization of labor and economic resources, is to make all the nation's resources, human and material, effectively available for the prosecution of the war. We must not figure on the war ending next year or the year after. We must not bother our hearts as to whether England or any other state will want to make peace sooner or later or ever. We must not organize for the next few months only, or allow ourselves to be influenced or guided by any

[1] By General Gröner. Adapted from Staff Correspondence of the *New York Times*, December 14, 1916.

Ed. Note.—As indicated above, General Gröner is director of the War Emergency Office of Germany. This selection is from an interview with a staff correspondent of the *New York Times*. It is significant to note that sixteen months after this organization was effected General Ludendorff was able to say (at the opening of the great spring offensive of 1918) that the Teutons were superior to the Allies in every form of war supplies—a statement which was not officially denied by the Allies and which events in succeeding months did not belie.

other considerations than the determination to continue the winning fight so long as it may be necessary. That would only shunt us on to a false track. We must make ourselves absolutely independent of the rest of the world. Only thus can we achieve the whole measures.

The mobilization of labor and economic resources is not a temporary or half-way measure. We assure you it is not dictated by any necessity of the moment. There is, in fact, no such necessity at the present time. It is rather a farsighted policy to prepare for any and every possible eventuality of the world-war.

We reached the conclusion to do this as soon as we saw that the Chancellor's repeated peace offers fell on stony soil. We decided then that it was necessary to organize for a fight to a finish. There is, however, no rush, no hurry about it. The change will, and must, come very gradually. Such a colossal change can not be dictated at the Board of Directors' table and effected immediately. It is rather an organic development or evolution from one organic state to another, embracing and affecting the whole nation.

One may regard it as a great pyramid, of which the base is coal and iron. Then comes the transportation question. Then the auxiliary raw materials requisite for the manufacture of powder, steel, etc. Then the necessary semi-finished products, the finished shells and cannon forming the apex of the pyramid.

Closely connected with all this is the food question, in which I am also interested. We are building from the ground up. We are first going to double the output of shells and cannon, but we are not beginning at the top with the manufactured article. On the contrary, we are first doubling the coal and iron base of the pyramid by enlisting the workers necessary to double the output of basic raw materials. Intimately connected with this, we are taking measures to supply adequate food to the heavy workers, notably fats from the Hindenburg fat fund, to which, in answer to the Field Marshal's appeal, gratifying contributions are pouring in from the patriotic German peasantry and agriculturists, who now thoroughly realize what is at stake.

Next we are taking up the transportation question, first doubling traffic facilities for transporting coal and iron and other necessary raw materials by both rail and water, the canals being of especial importance for the war industries.

German locomotives are running to the Taurus in Asia Minor. We are operating practically all the Serbian railways with German rolling stock. We have thousands of cars in Transylvania and

Roumania, to say nothing of other occupied territories. After the transportation problem, we are taking measures to double the production of the auxiliary raw materials and semi-finished products. As one example, we are doubling our efforts for the manufacture of nitres from the nitrogen of the air. Not only of the basic raw materials, coal and iron, but of auxiliary raw materials we have no lack.

The brains of our chemists and technicians are supplying the missing imports, and will continue to do so. Only when we have accomplished all this will we proceed to the last step of doubling the production of shells and cannon. Such a war is not to be won by looking ahead from month to month, but only by thinking of the distant future. After we have doubled the pyramid, we shall proceed to treble it.

By spring we shall be going full steam ahead. After that our production will increase from month to month; and we have the labor and raw materials for keeping up the pace indefinitely.

The male working forces available between the ages of seventeen and sixty, as provided by the Auxiliary Service law, will cover our requirements into the distant future, but ultimately, aside from the children, aged and sick, every man and woman will be enlisted for home defense, if necessary. The home army will be the whole nation.

What we are engaging on is not alone the progressive mobilization of all the nation's physical strength and material resources, but the mobilization of the nation's brains. An army corps of professors, scientists, chemists, engineers, technicians, and other specialists is already working with the Kriegstaat. Our idea is to be eminently scientific and practical—no theorizing. We are working to show results.

We are co-operating closely with the war industries of Turkey, Bulgaria, and Austria. It means doubling and trebling their ammunition supply, too.

The military successes achieved in Roumania, which synchronize with the birth of patriotic auxiliary service, are an advantage that cannot be overestimated. The Danube means everything to us. Last year we had to beg Roumania for her oil and grain and pay our good money for it too. Now we don't need to beg costly favors of Roumania.

Lloyd George does not scare us. We have, however, not time for busying ourselves with politics; we have more important things to do—supplying Hindenburg with the means of victory.

4. THE ECONOMIC BREAKDOWN OF RUSSIA

A. HOW RUSSIA NEGLECTED ECONOMIC ORGANIZATION[1]

At the beginning of the war the Russian government did not anticipate more than a few months of fighting and accordingly made no plans for a prolonged struggle. The Russian public acquiesced in this program, and civilian aid was primarily directed to relief work for the sick and wounded of the army.

The mobilization of the army was carried out with great speed but regardless of economic consequences. The policy of the Russian government seemed to be the simple one of calling to the colors great numbers of soldiers (20,000,000 men were mobilized) who should be sent to the front without delay, without adequate equipment, and without thought of the effects upon the industrial organization back of the lines. As a result of this policy the first months of the war completely dislocated the economic life of Russia. Among the instrumental factors in the situation the following may be mentioned.

First, the disproportionate mobilization of the man power of the nation served as a heavy drain upon the supplies of food and manufactured goods. Production of necessities shortly proved inadequate to supply the army with the necessities of existence. The situation was rendered much worse because of the wasteful and corrupt methods of the Commissary and other services.

Second, Russian industries were disorganized because it was necessary to evict the German element that had established itself, under a definite program of penetration, in almost every branch of industry. It was not a question simply of taking over the German capital that had been invested in Russia, for in almost every case German capital had been accompanied by German administrative control of the enterprise. Many factories and other enterprises had to close down, for the moment at least, because the directors and managers were German subjects, requiring internment.

Third, the war closed all of Russia's ports except Vladivostok and Archangel. These two ports were used exclusively for the import of war munitions. As they were inadequately equipped to handle even this most necessary import, this meant practically a prohibition on the import of any but war supplies.

[1] By Samuel N. Harper.

Ed. Note.—Mr. Harper holds the chair of Russian language and institutions at the University of Chicago. He has spent many months in Russia since 1914 and was an eye-witness of the Revolution of 1917.

Fourth, the herds of the provinces immediately behind the line of battle were simply requisitioned, in some instances whole herds being taken without any regard to the future economic welfare of the given districts. Time and distance alone prevented requisition from all parts of Russia. The cattle were taken to the front in herds, often driven on foot, and were slaughtered on the spot where the meat was needed for the soldiers, the hides being thrown aside to rot. As a result of this wasting of the hides the supply of leather for military uses and for shoes for both the army and the civilian population was soon utterly inadequate to meet the requirements.

Horses were also requisitioned for the armies, leaving the supply for agriculture quite inadequate for the needs. As a result of decreased agricultural production and a lack of transportation facilities, the army horses could not be supplied with food and they died by the tens of thousands.

Fifth, the railway system of Russia, far from efficient even in peace times, broke down completely by the end of the first year of the war, because the rolling stock was allowed to deteriorate. The number of what the Russians call "sick" locomotives and cars, which were simply put aside, though very slight repairs would have returned them to service, was enormous. The basic difficulty here was that the railway repair shops were converted into munitions factories.

Sixth, the converting of many industries to the manufacture of war supplies, and the taking over of the entire output of many manufacturing concerns for the supply of the army, led to a shortage of manufactured articles on the open market for the civilian population. By the end of the first year the shelves of many large warehouses of firms dealing in clothing, boots, and so forth, were empty. By the third year of the war so great was the dearth of cloth that one noted that while the lines in front of the bakeries formed only in the early morning hours, housewives gathered in front of the shops which sold cloth, at eight in the evening, to wait the twelve hours of night for the opening of the shop in the morning.

The Russian public from the very first weeks of the war organized to assist in the care of the wounded and sick soldiers. The organization was mainly through the local government bodies, called municipal and provincial councils, which formed "All-Russian" Unions to co-ordinate their activities. The men at the head of these so-called public organizations, as opposed to governmental departments, realized toward the end of the first year of the war that they must extend the field of their activities in order to prevent the growing

disorganization of the economic life of the country. So these organizations entered upon a campaign of "saving" and "production." They saved the hides that were being thrown away, collected the discarded boots at the front and repaired them, and took over the task of supplying the underwear for the whole army—mobilizing the village co-operative societies to fill the large orders. And they did much to organize the refugees from the invaded districts for productive work. In a word, these men saw that the war was going to extend into years and they realized that only foresight and organization of productive resources would make it possible for Russia to withstand economically the burdens of a protracted struggle.

The attitude of the governmental authorities (the bureaucratic departments) toward the work of these non-bureaucratic, but public, institutions (the Unions of the Municipal and Provincial Councils) was one of suspicion and antagonism, and difficulties were put in their way with the deliberate intent to block their activities. The institutions were suspected of pursuing political aims. Only when it became clear that the ruling group in the bureaucracy was consciously allowing the country to drift into a state of anarchy in order to bring Russia out of the war did these leaders venture to risk revolutionary methods of action.

The president of the All-Russian Union of Provincial Councils, the Zemstva, was Prince Lvov, the first Prime Minister of the new Russia after the revolution of March, 1917. In the monthly reports of the work of the All-Russian Union of Zemstva, Prince Lvov repeatedly issued warnings of the impending economic collapse of the country. But neither he nor Kerensky was able to liquidate the heritage received from the old régime in time to stave off the series of economic and financial crises of which the Bolsheviki availed themselves.

B. A WARNING OF IMPENDING ECONOMIC COLLAPSE[1]

The end of the war cannot be seen, and no human vision can at this moment define its duration. Only the united will for victory of the peoples struggling against the German coalition gives confidence in, and the safe foundations for, a lasting peace. Therefore all the

[1] By Prince Lvov. Translated from *Bulletin of the All-Russian Union of Zemstva*, October, 1916.

Ed. Note.—Prince Lvov was at the time president of the All-Russian Union of Zemstva.

questions of the continued and organized regulating of the supply of articles of prime necessity to the army and to the civilian population, and first of all the problems of food supply, have become more and more present and persistent. We note the daily instances of disorganization in the supply of food and articles of first necessity—prices have gone up enormously, and frequently one cannot secure products at any price. The reason lies solely in the absence of proper organization and also the absence of definite knowledge as to what we have and what we need . . . . [ten lines deleted by the censor].

At the present moment comprehensive statistical material has been collected, which gives a certain amount of information. But untiring effort is needed in this field. But most of all one must have the co-ordination of all supply enterprises, with the institution of a single responsible control over them. It is important that all institutions that have to do with problems of supply should act on the same established principles, while local public forces should be secured the widest possible latitude, as they are better acquainted with the actual economic needs of the population.

Finally, society itself must learn to see in all these questions a national significance, and interests of state, which will supersede both class interests and also class prejudices. Both these factors exercised considerable influence during the discussion of the fixing of the price of wheat. Some tried to show that "landlord" Russia had the right to the same war profits as were received by representatives of the industrial class in time of war. Others saw "agrarian influences" where in fact it was simply a question of supporting the fundamental source of our national wealth, the labor of the agriculturalist, who not only uses bread but also sells it. But we shall know how to free ourselves here from mere phrases and to look directly at our Russian situation without any desire to make disclosures, but with the idea of assisting. We shall at the same time know how to develop in the public the strong sentiment and discipline which come from a sense of responsibility and national duty.

C. THE SITUATION IN THE THIRD YEAR OF WAR[1]

The old régime has seemingly done everything deliberately to destroy and demoralize the trade-industrial apparatus it took years to build up. As a result the usual course of the country's economic life was stopped, and at the same time, through the peculiarly enforced system of regulations, a wide field for all sorts of abuses and speculations was opened. We must frankly acknowledge that from these abuses and speculations a system of oppression grew up which has called forth fully merited reproach, distrust, and hostile feelings towards the representatives of the trade-industrial class.

At the same time there can be no doubt but that under present circumstances, lacking most of the necessaries of existence, with the factories and mills forced to cut down their production due to lack of raw material and fuel, with the demoralization of the transportation system, and being compelled, despite all these obstacles, to meet the numerous requirements at the front—there is no other way out but government control of private industrial and mercantile enterprises, and the cooperation of the democratic masses of the population in the matter of regulating the trade-industrial life of the country. In addition to fair distribution it should be the task of all the committees, which are to become parts of the Ministry, also to regulate the prices.

Closely connected with this question there is another one which I personally consider of tremendous importance. I have in mind the question of limiting the profits of all mercantile and industrial establishments.[2] Undoubtedly a properly worked-out solution of this question would have the tendency to check the unwarranted growth of prices that would appease the masses. The moral effect of a decree limiting profits is of tremendous importance, not only in that it would soften the feeling of ill-will towards the trade-industrial class, but also because it would afford the government a new, convincing proof that the commercial and industrial class is ready to make all possible sacrifices for the common good, a proof which would paralyze the voicing of any new demands on the part of the masses.

[1] By A. I. Konovalov. Adapted from an address before the Moscow Stock Exchange on April 14, 1917. Printed in *The Birth of the Russian Democracy*, pp. 260–64. Copyright by A. J. Sack (Russian Information Bureau, Woolworth Building), New York City, 1918.

Ed. Note.—Mr. Konovalov has been one of the most prominent financers of Russia and was minister of trade and industry under the first provisional government of Russia.

[2] Ed. Note.—See selection LIII, 2, for Russian prices in 1918.

Now, these are the main ideas, the fundamental points of view which the trade-industrial class should consider as a starting-point in its efforts to win the confidence of the population and to safeguard that important position which it ought to occupy in the life of the country.

The situation is becoming all the more difficult because of the ever-increasing famine due to the shortage of means of production as well as of all the necessaries of life; this famine will be felt very acutely, not only on account of the lack of these goods, but also because of the overabundance of paper money. Uncontrolled commerce with a tendency for acquisition of property abroad, which is prone to develop under such circumstances if left to private enterprise, must lead to the further depreciation of the ruble.

VI

OBSTACLES TO RAPID MOBILIZATION IN LIBERAL COUNTRIES

Introduction

The anxious query has many times been raised since 1914, Can a nation with democratic institutions be made efficient for the purposes of war? The answer has apparently been that, given time, liberal states can cope reasonably well with autocracy. It seems to be generally agreed that whatever a nation such as England, for example, may now lack as compared with Germany in the matter of thoroughgoing co-ordination of effort and in disciplined efficiency is largely offset by "spiritual" forces that are unknown in the heritage of Teutonic culture. Whatever may be the balance of these ultimate factors in military efficiency, it is one of the most obvious lessons of the war that, without abundant time, individualistic countries such as England and the United States would have been impotent in the present conflict.

The organization of public opinion in England (Section XIX) reveals the tremendous handicap that a heritage of individualism imposes to a rapid and effective mobilization for war. Incidentally, the recognition of social responsibility and community interest that is eventually brought home to individualists is one of the most salutary results of the war. It may lead us generally to understand that the essence of democracy is a co-operation in which it is the duty of each to contribute to the common good according to his ability.

At the time of our entrance into the war it was confidently assumed by most Americans that whatever might be our shortcomings on the distinctly military side of war, the American genius for business efficiency would manifest itself in a way that would amaze the Old World. Yet the first year of the war revealed that we were "weakest where we were supposed to be strongest." What was wrong? Two things. First, the individualism which characterizes ordinary business activities has little place where the task is a national one—that of organizing and co-ordinating the business activities of half a continent with a single end in view. It required the better part of a

year for this race of amateurs in the matter of national economics to come to a real appreciation of the nature of the industrial problem that confronted us. Second, there appears to have been a very general inability to appreciate the importance of the time element. Quantity production of standard supplies was the end sought, and, moreover, since we are the nation of great inventions, everything must perforce be of American design. The result was paralysis in many lines of war manufacture.

Significant revelations are made (Section XXI) bearing on the flexibility of our governmental machinery, of its efficiency for the purposes of warfare, and of its adaptability in general to the conditions of the intricate social and industrial world of our times. The concrete examples of the task involved in developing the machinery for war administration in the field of labor and industry respectively (Section XXII) are given in detail in order that one may realize the enormous amount of time that is required for a nation with no administrative agencies for war—and few for peace—merely to get ready to do something efficiently.

XIX. The Organization of Public Opinion in England[1]

In order to organize England the first thing was to organize public opinion. This is necessary in a democracy, where the state has no prestige and no power to command, where also it lacks the means of exerting pressure on public opinion.

In England public opinion organizes itself, and pretty quickly, when urgent questions arise. This is a result of natural adaptation; it is a form of reaction gradually acquired, and now become instinctive, because necessary in a country where no measure of national safety can be taken unless opinion insists upon it. At the end of May, 1915, it was given to the writer to see the beginning of this operation, an operation that was to result in really organic changes. Its progress and each of its different phases could be followed from day to day. First came the alarm bell of the *Times*,[2] which all the great newspapers re-echoed; then questions in parliament, meetings throughout the

[1] By André Chevrillon (see p. 182). Adapted from *England and the War*, pp. 163–68, 202–13. Copyright by Doubleday, Page & Co., Garden City, New York, 1917.

[2] Ed. Note.—The occasion for the alarm was the utter collapse of an English attack in Artois, made in co-operation with the French, owing to an almost complete lack of high explosives.

country, with speeches by the chief party leaders and popular speakers —after this, letters from the public to the papers, examining the new question from all sides, many of them signed by famous names—authors, professors, bishops; on the fifth day, the first posters, put up by the voluntary recruiting committees, summoning the workmen, by striking pictures, to work in the munition factories: and at the same time, at all the news agencies and on the railway bookstalls, the first propaganda pamphlets—on the following Sunday in the towns, in church and chapel alike, sermons delivered by famous preachers, stimulating the minds to the idea of the unanimous and necessary effort. A week later, in a little country church, where the rector was addressing his congregation of farmers and labourers, I heard the last vibrations of the alarm bell passing over the quiet rural world.

We saw what the sensation was. England was realizing what she lacked in order to fight Germany: a systematic organization commanded from above. Insufficiently directed by a party government which had never imagined any other enemy than the opposition party, left to her routine, to her faith in the happy tendency of private activities to adjust themselves mutually for the general welfare, England, in this war in which industrial superiority seemed to play the decisive part, England, the classic country of mechanical industry on the great scale, had shown herself for ten months powerless—some people said openly incompetent. Towering furnaces, forges, foundries, factories unceasingly covered with a pall of everlasting smoke her northern and western counties, yet she had not been able to cast, turn, and forge the cannon and shells, the accumulation of which, still more than the numbers of the men, would compel victory. Such a fact seemed amazing and all-important. Not only did it leave English soldiers defenceless in face of an enemy who had increased his armament to an incredible extent, not only did it detain in England the greater part of the new troops, which for lack of arms and munitions it was futile to send to be shot down by the Germans, but it discredited England in the eyes of many Englishmen, for it betrayed what seemed a national inaptitude. Thus it called in question the fundamental habits and principles of the English community.

In these extraordinary circumstances it was clear that the individual should no longer be free, that he must serve at the post appointed for him by a sovereign and competent authority. The country had to change her whole method of life, the old English method of adaptation

after the event, of adjustment under the spur of circumstances. *Wait and see* was, when the war was as yet but threatening, the latest definition of this method: but now to wait for the facts was dangerous. Facts must be forseen and provided against; nay, they should be compelled. It was no longer a question of adjustment to reality, but of bringing new realities into being. Thus sprang up the vision of, and the longing for, a new England, similar, but for the state of war, to that of which Mr. H. G. Wells had already sketched an ideal picture—an England ruled by an idea which may thus be defined: co-ordination, discipline, integration of the individual into a system, a system set up by the state for its own purposes and exacting the subjection of all to national ends. Naturally this idea was sure to meet with resistance, and it still has its opponents. Such changes in the modes and trend of life of an ancient nation attached to its habits and traditions can be accepted but slowly, but such was the impelling force of the new idea that it passed at once into act. Ten days after the alarm raised by the *Times* the old radical government committed hara-kiri, and a cabinet was formed such as had never been seen, for it brought together both parties, no doubt in order to attempt measures as unprecedented as itself. Then came the creation of a munitions department directed by Mr. Lloyd George, hitherto a specialist in democratic budgets, but now cheered by the Conservatives because they know his power and that no one can speak to the working men as he does—and he did speak to them at once, at Manchester, Liverpool, and Bristol (June 3, 4, and 12), and no longer of their rights, but of their duties and of necessary discipline. On the twenty-third of June the Munitions Act was passed.[1] Finally, on July 8, came the census, together with the institution of the National Register, on which was to be inscribed the name of every English subject, man or woman, from fifteen to sixty-five years of age, with particulars as to their domestic responsibilities, state of marriage or celibacy, trade or profession, and the special services they can render to the nation, whether for industrial or military purposes. By this new census, by this register which tells the state what use it can make of each for the good of all, the idea that each member of the community, along with all the others, has a social duty became visible and familiar to all, and people began to consider the possibility of obligations hitherto regarded as impracticable in this classic land of individual liberty.

The great majority of the British Army, two or three millions, enlisted voluntarily. Such a thing had never been seen and would

not have been thought possible; it is one of the finest collective acts of a nation on record. But all the same, this great tale of the conscientious came to an end at last, and then those who had shirked the recruiting office came more and more to be looked on as an inferior class with whom one might take liberties. How much was now left to them of that private and guarded domain of freedom and conscience which no one is supposed to enter? Recruiting agents, volunteer *canvassers*, clergymen, neighbors and their wives, local notabilities—a clamorous throng pours its invasions into this desecrated retreat, urging, forcing the shirker to take the pledge, no longer content with taking what once would have seemed the liberty of putting a question on such a private matter, or daring to offer unsolicited advice. Intimidations, well-nigh compulsion, are now used; humiliating and unjustifiable, exerted as they are by a casual stranger, and not by the state. Life has become unbearable to the man who still takes the word "voluntary" in its literal sense, and still fancies he has the right to refuse. The rector or squire of his village asks the reason of his abstention, his employer threatens to dismiss him, his sweetheart to throw him over, his lady friends cut him, others, whom he has never seen, present him in the street with that English symbol of cowardice —a white feather. What now of the sacred principle in whose name, for all its illogical injustice, the country refused to change a system which kept it in a state of military inferiority? Only a word is left, and the most clear-sighted and sincere of the Radicals, these staunch enemies of conscription, perceive this plainly enough and end either in supporting or at least in tolerating the idea of compulsory service —talking no longer of principle but of expediency, and accepting beforehand what the government, the only competent judge of the necessity, decides. "*If it must be, it must.*"

But for the masses, never given to analysis, a word, even when it no longer corresponds to reality, may remain all-powerful—a stimulus to feeling and to action, like some dogma which can inspire fanaticism even when it means nothing to the brain. This essential power of words and signs, and in a more general sense, of appearances and forms, even after the whole substance of their contents has vanished or changed, the English have always intuitively and dumbly understood. Instinctively they respect this power; more, they know how to turn it to account, with that innate and deep-lying sense of life and its irrational processes which makes them so indifferent to logic.

It is this national trait which affords the means of solving, in true English fashion, what would seem, a priori, an insoluble problem: how to impose military service on men who regard it as the most humiliating slavery, and who are not to be coerced. A good enough working solution—the English do not insist on theoretical precision—was found by Lord Derby, who was forthwith commissioned to put it into application. It was *voluntary compulsory service.* What does the English mind care about the absurdity of such a conception, *if it works*, as they say, if it gives practical results? Voluntary enlistment, so called, had in fact already become almost compulsory through the pressure of opinion, through the application of well-nigh irresistible influences to all who hesitated or refused. It only remained for the state, following the lead of the general public, to assume over the shirkers certain final rights and powers unrecognized by any statute of the written Constitution, even contrary to the spirit of the unwritten Constitution. Observe that great care was taken not to assert these rights and provoke the defenders of ancient liberties and traditions by proclaiming a new principle. The English, when aiming at practical ends, instinctively feel the danger and futility of exciting passions by setting up a new principle against an old. It is by silent and gradual pressure that the state, in its want of soldiers, attempts to extend its powers, assuming no direct responsibility, taking care not to commit itself, simply authorizing provisionally a certain private citizen, Lord Derby, until then quite unconnected with the government, to exploit a certain private idea of his own, a patent system of which he is the inventor.

The starting-point of the new system was the National Register, drawn up in July, the chief object of which had been to prepare state control over the individual by instilling into his mind the idea that the community has a right to the service of each of its members, and that such service may be exacted. From this huge catalogue the local committees extracted the names and addresses of all those of military age and transcribed them in special lists (*pink forms*). They form a class apart; the state has not seized them, but the state is watching them, and its attitude clearly reveals its purpose. Still the class of men who are wanted is not yet sufficiently defined. For the fact is generally known that the government does not want to stop all the manufactures of the country; it wishes England to go on as long as possible producing and exporting the goods which will enable her to meet her financial obligations—greater than those of the other

belligerents and further increased by loans to her Allies. It is therefore easy for a man who does not want to enter the army to persuade himself that he is supporting, more or less directly, one of these indispensable industries. So Lord Derby adopts the plan of marking by a star placed against their names those who are more useful in their offices or workshops than at the war, the result, of course, being that the others feel themselves more clearly pointed at than ever. He goes further by providing with an armlet all those who have passed through the recruiting office, as a visible sign of their accomplished duty and a protection against public censure—which is thereby drawn down on those who do not wear an armlet. More significant still—for here the compulsory nature of the system first clearly shows itself—special courts are created to decide without appeal who are entitled to be "starred"; and often masters are seen appealing for permission to keep a clerk or workman on the plea that he cannot be spared. Thus, for every Englishman from eighteen to forty, Nelson's order, so often quoted, takes on an ever more imperious meaning. It is no longer, "England expects that every man will do his duty," but England requests every man to do his duty; and the summons is soon so strongly expressed, so insistently repeated, that no one any longer feels free to neglect it, and a stronger will is required to stand back than to enlist. Hitherto the government had left everything to the propagandist societies and committees; now it speaks, urges, threatens, foreshadowing drastic action, and the peculiar tone of its language shows clearly what sort of men it is addressing—the so-called *shirkers* and *slackers*, who, now that all brave men have enlisted, are almost looked upon as defaulters. "If you are not ready to march," says Lord Kitchener in very plain words, "until you are made to, where is the merit of that? Where is the patriotism? Are you going to wait to do your duty until you are fetched?" What a difference between such language, which almost threatens, and the simple, quiet words which, last May, placed without comment the need before the country, leaving each man to judge and decide for himself!

Almost at once, to increase the pressure, the demand becomes more personal, not in the figurative fashion of posters and speeches, which aimed at giving each man the feeling that he was personally addressed, but actually, unceremoniously calling him by his own name, hunting him up at home, pursuing and worrying him in his private life.

First of all comes a private letter signed by Lord Derby, delivered at the man's house, to impress on him a rigid, simple conception of duty and dispel beforehand all illusory excuse by obliging him to put to himself this catechism: "Am I doing all I can for my country? Would the reason which I am giving for absention be considered valid in a country where there is universal service?" After this comes an attempt to force a decision by notifying the date after which choice will no longer rest with him; for though enlistment is still supposed to be voluntary, he is warned that if he does not enlist he will at a very early date "be fetched." Whereupon the doorbell rings and the *canvasser* enters, sent by the local voluntary recruiting committee. Like the members of the committee itself, these visitors are usually local notabilities above military age: municipal councillors, clergymen, dissenting ministers, merchants, manufacturers, presidents and secretaries of trade unions, workmen, election agents of both parties, officials of political and private societies—and each makes a point of calling on those men whom he knows more or less closely, and who are supposed to be open to the visitor's influence, for the whole process is direct, living, and human. If the man is not at home, the orders are to keep on coming until he is found, to tackle him by asking and discussing the reasons of his resistance, by talking to him of allowances and pensions, after which, if the result is negative, a fresh start is to be made, this time indirectly, by trying to put pressure upon him through his family, his friends, or his employer. This employer is sometimes the head of a government department. In that case he has not waited to act. Finally a list is drawn up of the decidedly intractable, which looks very much like a roll of dishonour, and those who base their refusal on religious reasons, as in Russia the Doukhobors, are in a truly pitiable position. In the presence of such proceedings one can understand the exclamation of a speaker at a meeting of the No-Conscription Fellowship. "Better," he cried, "legal compulsion!" to which, of course, an Englishman can always, if it be a question of defending his conscience, honourably offer passive resistance. Yes, the heavy hand of the policeman, prison itself, where a conscientious objector can assume—like those in old times who refused to pay ship money—the halo of sacrifice and almost of martyrdom, are better than this continual, nameless persecution, which, whilst pretending to respect your liberty, tries to damage your character. Besides, the man feels that, in fact, he is already no longer

free; he has but the choice between an act which they still deign to call voluntary, and an act which will be exacted from him in a few months, or weeks, by the law, and, in case of refusal, by the police. At the end of November the state feels so sure of its right to the person of every fit man for the defence of the country—a right, mark you, not yet put forward by the statute—and is so certain of public opinion that it takes that right tacitly for granted, at least in the case of the unmarried men, by suddenly forbidding them to leave the country. Till that moment appearances had been preserved and it could still be said that only a voluntary act had been requested with greater and greater urgency. Theoretically, at all events, "liberty of the subject" was still intact. But when policemen prevent Englishmen from boarding a steamer bound for a foreign port, conscription or no, a new principle is being applied—a new epoch begins in the history of this nation.

That last measure affected only the unmarried men. The fact is, that by these essentially English methods which respected familiar forms and formulas whilst emptying them of their ancient contents in order to fill them cautiously with an opposite meaning, solutions were being arrived at no less peculiarly English—solutions, that is, fragmentary, special to the case, and in the nature of a compromise—solutions in which the new principle is present, but hardly expressed, laying no claim to absolute truth, and thus avoiding challenge to the defenders of the old principle. Conscription—perhaps; but first only for this limited class; or, later on, indirect compulsion through the intervention of the local authorities, such as requisition of a certain number of soldiers from every town and county on the supposed authority of obsolete laws suddenly unearthed.

XX. The Position of the Press[1]

The power of the press for good or for evil is proverbial. In connection with the mobilization of our resources for war the press of the country has for the most part worked at cross-purposes with national requirements and with the explicit desires of the government. This is a strong statement, and it needs qualification as well as explanation. It needs qualification in that the newspapers and magazines have been indispensable aids for the dissemination of information as to the causes of the war, and indispensable also in giving publicity

[1] An editorial.

in connection with our numerous Liberty Loan and Liberty Savings campaigns. The explanation of the statement above is to be found in the attitude of the press of the country toward the advertising of luxuries and nonessentials generally.

The newspapers and magazines are at all times largely dependent for their financial support upon advertising copy. This advertising is, moreover, largely in the field of luxuries, because the staple lines of necessities require relatively little advertising. In time of war the move for economizing, which sooner or later develops, appears to necessitate, on the part of individual manufacturers and dealers in luxuries, increased advertising as a means of checking a retrenchment of consumption which would mean to them a loss of profits. It is a very natural impulse for the individual who finds his sales declining to try to check such decline by convincing the public that it is important for the nation that his industry be continued—in order that the necessary revenue may be available for government purposes. It is easy to understand also that the newspapers, which so largely depend upon advertising of luxuries for their financial support, should hesitate to refuse advertisements of such commodities. Indeed the increased advertising that war occasions appears as a godsend to the newspapers, whose costs of manufacturing, as well as news service, is tremendously increased under war conditions.

As a result of the situation thus outlined we find that the press of the country not only has advertised luxuries and nonessentials of every description continuously since the war started, but, until very recently in this country, has been in its editorial columns a strong opponent of economizing and an ardent proponent of the doctrine of business as usual. The gravity of the problem is revealed by the fact that one of the largest publishing companies in New England refused in March, 1918, to print a quarter-page advertisement consisting of quotations from President Wilson, Treasurer McAdoo, and the chairman of the War Savings Committee, which urged economizing as a matter of national importance, after having contracted to run such advertisement for four days and having already carried out one-half of its contract. On April 12 this publishing company settled with the inserter of the advertisement for a breach of contract by paying $500 damages. The circumstantial evidence of the case is that the advertisers of nonessentials controlled the policy of the publishing company

and exercised its control to the extent of excluding from its advertising pages official statements on the subject of economizing. It is not putting it too strongly to say that for the first year of the war the press of the United States stood almost unanimously opposed to the curtailment of nonessential production—implicitly if not explicitly.

However much we may sympathize with the position of the press occasioned by their unfortunate dependence upon the advertising of luxuries, we must nevertheless set it down as one of the strongest obstacles to a rapid mobilization of our industries. A government-controlled press would have early centered upon the newspapers as one of the more effective agencies for the preaching of thrift. A democratic press, by the very nature of our institutions, can be coerced in the support of government requirements in opposition to its own pecuniary interests only after many months, if not years, of war experience.

XXI. Working at Cross-Purposes

1. WHY AMERICA LAGS[1]

The different branches of our government and administration are not in the habit of working together. We took over from an age of despotism the conception of the government as a potential enemy, which we had to divide in order to conquer. Our administrative departments, to be sure, are directly dependent on the president, and in specific cases might, by his order, be made to work together. But in practice they do not work together regularly and smoothly. If you want to know what is being done about a certain matter you may find some preparation for action going on, we will say, in the Navy Department, the Shipping Board, and the Tariff Commission; but you are unlikely to find that one branch knows what is going on in the others. Those who were in Washington when the British experts first arrived will recall the chance expressions of bewilderment that escaped them. They had exceedingly important information to communicate, but nobody could tell them where to communicate it, nor, when they had enlightened one apparent authority, had they any guaranty that the information would be transmitted to other authorities equally in need of it.

While the Food Administration arranges with the Chicago packers to place limits upon the charges they might otherwise make in war

[1] By Alvin Johnson (see p. 43). Adapted from "Why America Lags," *Unpopular Review* (April–June, 1918), pp. 228–32. Copyright by the *Unpopular Review*.

time, the Department of Justice serenely proceeds to prosecute the same packers for violations of the Sherman Law dating back to peace times. One would suppose that an arrangement might have been made by which Mr. Hoover could use the Department of Justice as a club. "We have the goods on you: now cooperate with us faithfully in this war emergency or—." But no; Mr. Hoover asks the packers to cooperate, and Mr. Gregory prosecutes them.

Labor in the Northwest is pretty well infiltrated with I.W.W. ideals. That may be a pity, but it is true. If we want spruce for aëroplanes or fir for ships, if we want ships built on Puget Sound—and heaven knows we want ships built at every point from which they can float to deep water—we have to employ I.W.W. men and their sympathizers. And it is worth noting that those I.W.W. laborers have done important pieces of our war work in record time. The actual producers have found it not impossible to do business with men of I.W.W. leanings and to get them to agree to sink their private predilections for sabotage for the country's good. And while the employers of labor were achieving this unexpected result the Department of Justice fell upon the I.W.W. leaders with indictments for conspiracy. Believe what you will against these I.W.W. leaders; many of them were to be counted on to hold labor in line, and the rank and file of workers in sympathy with the organization now feel suspicious of the government and all its works.

Anyone who has observed the concrete details of our administrative blunderings must recognize that what chiefly ails our government is not the character of Mr. Baker, of Mr. Daniels, of Mr. Gregory, or of Mr. Houston, not the competence of the personnel of the Interstate Commerce Commission, or the Shipping Board, or the Food or Fuel Administration, nor the character of the president himself, but a system that divides our administration into water-tight compartments, and makes not only common action impracticable, but conflicting action inevitable. Under our administrative system, as it now stands, the cabinet is not a body endowed with joint responsibility, but an association of independent chiefs with only the president's volition, sporadically exercised, to hold them together. On any particular matter involving the cooperation of more departments than one, the several chiefs may indeed work out a common plan, and they do this, in fact, with sufficient regularity to keep the country's business from breaking down altogether. But no single chief or group is responsible for taking the initiative toward common

action, and if a dominant personality in the cabinet attempted this he would straightway be suspected of a purpose of personal aggrandizement and would meet with stubborn resistance from the other chiefs and their departments. Let it also be remembered that the functions of the several departments are fixed by the laws constituting them, and that any attempt on the part of a dominant personality in the cabinet to override the wishes of his colleagues respecting their proper fields would be bound to fail.

We shall get nearer to the heart of the matter if we will examine in detail some concrete problem of war administration. Let us take the railway service as an example. When we entered the war it was plain that a tremendous strain would be placed upon the railways. They had to prepare themselves to move great masses of material for the construction of camps, and to transport hundreds of thousands of soldiers, some over distances running into thousands of miles. They had to keep munitions and supplies for our Allies moving, and to meet more promptly than ever our pressing civil needs. This meant that the railways had to work as nearly as possible as a single organic unit. And under the Railways War Board they honestly tried to do this.

But while they tried to work as an operating unit, they could not work as a financial unit. They could not make whatever operating arrangements would best meet the country's needs and take their earnings out of a common pool. This would have been to violate the anti-pooling law, and any move in this direction would have brought the Department of Justice about their ears. They could not make their arrangements with the expectation that any road, part of whose traffic was diverted to lines that could handle it more expeditiously, could recoup itself by higher rates on the remaining traffic; this would have been to run afoul of the Interstate Commerce Commission. There were possibilities of relieving the railways of less-than-carload freight through development of freight service on electric lines and corresponding reduction of passenger service, but here the jurisdiction of state public-service commissions would have been involved. It would have been possible to throw much necessary freight to lake and coastwise shipping devoted to carriage that might have been dispensed with, but such an arrangement required the cooperation of the Shipping Board. Finally the roads might have discriminated in favor of essential shipments and against unessential ones, but to do this on their own account would have been in contravention of

the Interstate Commerce Commission Law. They did, in fact, discriminate in favor of shipments endowed by the executive departments with the priority quality; but when the War Department, the Navy Department, the Food Administrator, the Fuel Administrator, were issuing priority orders without reference to one another, what headway could the railways make against the confusion? The voluntary railway organization, being human, failed of its purpose.

Any concrete problem of industrial mobilization, as the foregoing example indicates, involves the coordination of many branches of the government. The railways could have operated successfully as a unit if they could have induced Congress, the Department of Justice, the Interstate Commerce Commission, the state public-service commissions, the Shipping Board, the Army and Navy, and the Fuel and Food administrations to work together.

2. A NATION OF ECONOMIC AMATEURS[1]

The problems which faced our national leaders upon our entry into the war were literally staggering. A nation whose whole tradition was one of peace was to be placed in the physical and mental attitude to wage war. Its human and industrial resources were to be reorganized to meet the drains of war. For the direction of these tasks there was a pitifully inadequate staff of officials—inadequate in numbers, in training, in outlook, and in authority—who had not even had in proper measure the advantages flowing from preliminary planning.

Under the circumstances, it is not surprising that much industrial confusion attended our efforts. Conditions in the Ordnance Department[2] may be taken as an example of the difficulties involved. At the outbreak of the war this department had on duty nine commissioned officers at Washington and a total of ninety-seven in the entire country. Its peace-time expenditures had been about $13,000,000 per annum. From this nucleus there was developed in one year a staff at Washington consisting of 3,000 officers, 1,700 enlisted men, and 9,200 civilians, with a total of 5,000 officers in this country and

[1] By L. C. Marshall (see p. 180). Adapted from "The War Labor Program and Its Administration," *Journal of Political Economy*, XXVI (May, 1918), 425–28.

[2] The conditions in the Ordnance Department were of course not peculiar. The Quartermaster Corps, the Signal Corps, the Medical Corps, the Navy, the Shipping Board, and all our other so-called production departments could recount a story substantially like that of the Ordnance Department.

abroad. This mushroom staff had charge of direct appropriations and contract authorizations amounting to several billions of dollars; it set up the mechanism for controlling the production of this quantity of material (for of course it could not be procured on the open market and its production had to be supervised); it provided the administrative forces for storing and handling, both in this country and abroad, the material when it had been produced and delivered. The enterprise was conducted in a fashion that was, upon the whole, admirable. Men could not be trained overnight, but able engineers and business executives were called into the service, assigned to duties in the various divisions of the work, given a considerable range of authority, and held responsible for results.

Admirable as was the approach of our higher officials to the problem placed before them, defects in operation resulted from insufficient planning and from the impossibility of training subordinates properly in the time available. It would be an unpardonable injustice to assert that the programs of the production departments were carried out with little planning. No one who came into contact with the overburdened officials responsible for the execution of these programs would make such an assertion. It is true, however (through little fault of theirs), that their planning was hastily done and was not well co-ordinated. Each production department and indeed each subdivision of each production department plunged into the execution of the task assigned to it, knowing little, and often caring less, how its actions would affect the execution of the programs of others. The officers in charge, particularly the subordinates, saw no other course open to them. They had been trained in our school of individualistic enterprise where "results" counted—"results," however, which did not depend upon national team work, since the projects involved did not demand the effective utilization of all the resources of the nation. The country demanded "results." In the absence of co-ordinating supervision at the top it seemed clear to the average production officer that his patriotic mission, to say nothing of his chances of preferment and promotion, began and ended in his "pushing his own program through." And he had a reputation as a "pusher." He was the veritable "he-man" so popular in Washington dispatches. He had superlative contempt for the "super-co-ordinator" who dared ask whether the nation's interests did not require studies in priority and carefully balanced production. Furthermore, this "pusher" was almost certain to have accepted the prevailing fallacy that the expendi-

ture of dollars rather than materials would win the war. He accordingly placed his emphasis on grinding out contracts for vast quantities of materials—an emphasis which the contractors themselves were not averse to stimulating. Under such conditions one can well believe that carloads of hull paint were delivered at shipyards where the ways had not yet been laid on which the hulls were to be constructed. The nation's resources, unadjusted as they were, could not adequately meet such haphazard demands.

The confusion resulting from the apotheosis of the Great American Pusher was accentuated by difficulties arising from another quarter. Since there was little or no guidance from the top, since the industries and labor resources of the country had never been effectively catalogued and classified for military purposes, since war contracts of European nations had been centered in certain districts, and since the successful business managers and engineers called into the government service came mainly from the industrial districts of the country, the outcome of the zeal of the contracting officers was a tremendous concentration of contracts. When stock could be taken of the situation[1] it was discovered that, aside from the contracts of the Shipping Board, one-fourth of all the government contracts for war purposes had been located in the state of New York alone, one-half in three states (New York, Pennsylvania, and Ohio), and three-fourths in seven states (New York, Pennsylvania, Ohio, Massachusetts, Illinois, New Jersey, and Connecticut). A greater dispersion existed in the case of the Shipping Board contracts because the vessels themselves were to be built all along our deep waterways. It is not improbable, however, that the contracts for accessories needed in shipbuilding showed a somewhat similar concentration, and the general belief is that the contracts of our Allies were quite as heavily concentrated.

The war-industry districts arising from this concentration of contracts rapidly extended existing plants and built new ones. They reached out to the rest of the nation for materials, money, and men. They required that scores of thousands of workers be transferred to them from districts where war work was not being done. Then followed a tremendous congestion of transportation facilities—a

[1] It is an illuminating fact that this stock was not taken by the production departments themselves. The Statistics Division of the Council of National Defense, headed by Dr. Leonard P. Ayres, was the "outside" agency which found time and opportunity to study what had been done and to report the facts.

congestion that was later to play its part in causing the issuance of a so-called fuel order which was really an order to relieve an "industrial jam."

3. THE NEED FOR CO-ORDINATION[1]

When the War Department wants another ship (and it always wants another ship) young Mr. Ewing plunges into his data and drags that ship out from a trade here or from a trade there and knows pretty well just what he is doing, because he has built a thorough apparatus for doing it. His is one of the marvelously extemporized business machines which we owe, in certain sections and sub-sections of our departments, to our new business recruits.

But the withdrawing of ships from their present routes is not a matter which is only a shipping matter. It is also an exports-and-imports matter, an international-trade-strategy matter. What has the Shipping Board to do with international trade strategy? This question has been answered in a manner in which, again, some people might think that a certain tardiness is discernible.

On June 15, in the "Espionage" Act, Congress authorized the President to exercise a certain control over exports. On August 21 the President confided this control to the "Exports Administrative Board," established for the special purpose of exercising it. But it is impossible to imagine an effective and useful control of exports in any particular unless it is conducted in harmony with a control of imports. Mr. Hoover, for instance, wishes to import cocoanut oil, palm oil, and soya bean oil to serve as a supplement and as a substitute for our native cooking fats. If we are going to import such things in increased quantities we must, for that reason alone, import certain other things in decreased quantities, and we must then send exports, in payment for our imports, to the places, if we can, from which our imports are actually coming. Therefore a control of imports, simultaneously and concertedly with a control of exports, was inevitable, and it arrived, exactly six months after our declaration of war, on October 6, in the "Trading with the Enemy" Act. Pursuant to that act, on October 12, the President established a "War Trade Board," which took over the duties of the "Exports Administrative Board" and which is now our one central authority for all licensing, actual and

[1] By William Hard. Adapted from the *New Republic*, XIII (November 3 and 10, 1917), 11 ff. and 40 ff.

Ed. Note.—William Hard is a well-known journalist, author of many articles on war problems.

prospective, of exports and imports both, and which is therefore bound to be our one compelling center of information and of final expert guidance with regard to our overseas trade.

Here, then, are two bodies which must work in harmony in the mobilizing of our merchant fleet and in the adjusting of our commerce. Who is it that the Shipping Board reports to? The President. Who is it that the War Trade Board reports to? It represents, in theory, in its six members, six departments of government: state, agriculture, commerce, treasury, shipping, and food. Having six masters it will, in practice, have none, short of the President. It can justly be regarded as one more department, outside the cabinet departments, reporting to the President alone. When, therefore, the Shipping Board has one policy and the War Trade Board has another policy (a case which is certain to occur because it occurs continuously between every two departments having anything to do with each other), the conflict will get settled only in one of the two ways in such cases now established and provided. One: it will drag on and on, without the President, through telephone conversations and luncheons and dinners and improvised conferences between the departments concerned, until a state of unanimous concessive consent is reached. Two: it will drag itself in pieces, in an *ex parte* statement by one combatant and in an *ex parte* statement from the other combatant, to the White House. Most people do not resort to the second way until they have tried for a very long time. They naturally do not want to "bother the President." The President therefore often gets blamed for delays of which he has no knowledge. The departments also get blamed. But what can they do? They have their choice between "bothering the President" and pursuing that sum and climax of all administrative difficulty and dilatoriness—unanimous, concessive, inter-departmental consent. Administratively it is precisely what the old Diet of Poland used to be legislatively. The *liberum veto* of one department can stalemate a whole game of action.

But the Shipping Board and the War Trade Board are not the only departments concerned in the matter now before us. There is also the Navy Department, which wants many ships for auxiliary purposes; and there is also the War Department, which wants more and more ships for its army in France. The War Department, most especially, must be considered. The ship that Mr. Hurley is going to transfer from tropical waters to the waters of the northern Atlantic, shall it simply go into the carrying of war supplies to the war-bound

populations of France or Italy, or shall it be commandeered to the special immediate war aims of the American War Department? Can Mr. Hurley decide this question? Can Mr. Vance McCormick, head of the War Trade Board? Can Mr. Baker? Mr. Baker, like every Secretary of War in the world, must regard the needs of his army as being supremely pressing. History will not blame him if we lose our sewing-machine trade with the Brazilians. History will most distinctly blame him if his army is not clothed and fed and munitioned to the last boot and the last dried pea and the last shell. The disposition of that ship will require a unanimous consent in which Mr. Baker's voice must be given a large range and in which the subject of the resources of our merchant fleet and the subject of our present and future overseas trade and the subject of our military efforts in Europe must reach a combined consideration and a maritime, commercial, military, strategic balance. There is no body of men constituted to strike that balance. There is no body of men responsible for striking it wrongly or for striking it too late. And even if Mr. Baker and Mr. Vance McCormick and Mr. Hurley should set themselves up, of their own motion, to be a board, meeting daily, to strike it and to take the responsibility for striking it, they could not do it, because it involves considerations far beyond even their combined proper authority. That ship which is to be transferred, should it not be assigned to the French instead of to Mr. Baker? Or to the Italians? Here tremendous questions emerge, questions transcending all questions maritime or commercial or military, questions in the realm of the highest international political world-settlement policy.

Is it surprising then that the French did not succeed in getting us to assign to them that 80,000 tons of new shipping and that they did not succeed in striking a bargain with us for giving us a lot of their existing sailing tonnage in just exchange for a half-lot of our existing steaming tonnage till after many weeks of running from one authority to another authority in Washington, and till after their one million tons of stranded materials on the American shore had become a staple topic of dinner-table conversations throughout Washington, and till after cablegrams actually had been received from American military men and American naval men on the other side of the Atlantic pleading for six tugs or something for the hard-pressed warriors of the French Republic? It is not too much to say that the representations of the French on this subject, candid representations, perfectly legitimate representations, had reached almost a world-wide scope in the ears

of American administrators, and politicians, and journalists, and military and naval personages before the moment of decision came. The interval between the moment of first representations and the moment of final orders was really scandalous. Let us assume that the final orders were right. They were reached in weeks, when all the facts were known in days. Yet where is the incompetency of any individual? Nowhere. Is it for Mr. Hurley to be ready off-hand to determine the partition of war effort between France and Italy and the United Srates? Is it for Mr. Baker? Is it for any other departmental head? Certainly not. Therefore it passed through a long stage of amicable jostling between departmental heads, and then it passed through another long stage of attempted appeals, from all conceivable quarters, to the much-harassed occupant of the White House, and then it got settled either by a belated verdict from the White House or by a desperate impulse from Mr. Hurley or by a sort of general tired "Oh-let-them-have-that-80,000-tons" feeling or, more realistically, by an intricate incalculable combination of those three natural developments.

In this way we can win the war. In this way we cannot win the war with a maximum of speed and a minimum of killed and mangled. Therefore people say: "In order to do every day's work on that day and not several weeks later, let us have a Grand Priority Board which shall determine a policy in tonnage and lay it down for everybody." Very good. Let us go on to see what such a Grand Priority Board would mean.

Let us suppose that our "Grand Priority Board" starts out to do it. The first step it takes is to present its recommendations, together with its data on which its recommendations are based, to the President. His approval is manifestly necessary. The Board may be unanimous in its recommendations. It may not be unanimous. That would make no difference. It would present a report, jointly, as a Board, as an impartial and supreme Board, with all rival claims analyzed and with various courses, or one course, of action suggested. The President would select, modify, approve. The gain, the inestimable gain, would be this: the will of the President would be informed by a group of men concertedly responsible for formulating impartial and supreme policies and concertedly responsible thereafter for executing them.

But have we not a Council of National Defense? We have. That is, we have a thing called a Council of National Defense. But

this thing has no concerted responsibility whatsoever. It continues, it defiantly continues, to be unable to bind even its own six members, as heads of cabinet departments, to any one course of action. It creates a War Industries Board and a Purchasing Commission within the Board; and the Purchasing Commission turns out to have one sort of power in relation to one cabinet department and another sort of power in relation to another cabinet department, and it turns out even to have different sorts of power in relation to different purchasing sections within the same cabinet department; and a manufacturer came to Washington the other day and sold the same commodity to four different purchasing sections at four different prices. As a commanding and coercing body for men the Council is much inferior to the General Federation of Women's Clubs for women. Whatever it has done of value has been done, in fact, for the most part by the camel-like quality of certain of its sub-committees of business men who have thrust their necks under the tent-flaps and pushed. The Council itself is not a Council. It is an unresolved hexagon.

Moreover it has nothing to do with shipping, except that it is ordered, by the statute which established it, to advise the President "as to the development of sea-going transportation." It may advise him. It is not empowered to execute its own advice when he has adopted it. He adopted the War Industries Board idea, at the time a good idea I still believe. And then Mr. Baker did what seemed right in his own eyes about it in the War Department, and so did Mr. Daniels in the Navy Department, and it is therefore clear that even if Mr. Hurley were a member of the Council of National Defense—which he is not—the Council could not and would not control him.

At one time the Council did indeed adventure itself into shipping by appointing a "Shipping Committee" of shipping men. But this committee just naturally floated away from the neighborhood of the Council and drifted into the neighborhood of the Shipping Board; and its chairman, Mr. Munson, now represents the Shipping Board on the War Trade Board.

The national value of the Council today might be summed up thus:

Shipping is at present the most important part of the war for us. The Council, partly because of its statute and partly because of its temper, has no control of shipping.

Shipbuilders have come to Washington and, in great perplexity, have demanded to know: Should they give priority to the ships they were building for the Navy or to the ships they were building for the

Emergency Fleet Corporation? The Navy wanted speed. The Emergency Fleet Corporation wanted speed. What power does the Council of National Defense possess, what power has it tried to get, to decide that certain ships shall precede other ships into the water and then *to enforce its decision?* None.

A body which cannot jointly and bindingly execute a high policy on all parties concerned will never even formulate a high policy. That is why the formulation of every high policy falls crushingly, time after time, on the President. That is why we assume that our "Grand Priority Board" will have the power to execute. That is why we assume that it will have the power to bind Mr. Baker and to bind Mr. Daniels and to bind everybody else. Otherwise it will not think. If it cannot act, it will not think.

Therefore, when our "Grand Priority Board" has made its recommendations to the President, and when the President has done his selecting and his modifying and his approving, we imagine the Board going on immediately to action. It has already strengthened the President's autocracy, his necessary administrative autocracy, by serving him as a machine, as a supreme and impartial machine, superdepartmental, for the informing of his will. It now strengthens his autocracy again by proceeding to execute his will, his informed and declared will, on all departments comprehensively and continuously. Thereupon his autocracy becomes effective because it becomes effectively possible. It gets confined to the hours of decision. It escapes the days of information undigested and of execution unharmonized. In shipping, in the war. *And in virtually everything else of high importance in the war.*

For, consider. As soon as the "Grand Priority Board" begins to enforce a shipping policy, it begins to tell the War Department how many men can go to France and therefore how many men should be trained just now, and it begins to tell the Navy Department how many destroyers can be built and therefore how many new bluejackets should be enlisted just now, and it begins to tell the War Industries Board how much steel can be transported to Europe for the Allies and therefore how much steel should be manufactured for the Allies in America just now, and it begins to tell our whole civilian population how much food it is likely to get from abroad and therefore what shifts of work or of appetite it must adopt for increased production at home or for increased abstinence, and it begins to tell something of some sort to almost everybody of every sort, public or private.

What is it then, this Board? We have seen that it is greatly desirable, that it is even, for harmony and for rapidity, unavoidable in the matter of shipping. But it reveals itself, as soon as it acts, to be much more, infinitely more, than a shipping affair. It reveals itself to be what is revealed finally in every other affair projected to bring harmony and rapidity into any high part of the war. It reveals itself to be the One Thing Needful—the "War Council of the United States."

XXII. Concrete Illustrations of the Problems Involved

1. DEVELOPING THE MACHINERY FOR THE ADMINISTRATION OF LABOR[1]

I. THE EARLY STAGES OF REMEDIAL ACTION

Our whole administrative approach to the problems of war made impossible any prompt solution through a centralized administration of labor problems. To begin with, we had not followed the English precedent of establishing a central department of production or Ministry of Munitions, in which contracts, control of production in relation to contracts, and control of labor in relation to production were placed under one administrative head who could keep the various factors in proper balance. Far from being under one control, our contracting and production departments were actually competing with each other in the procurement of supplies. Through their various contractors they were competing with each other for labor to be used in production.

In view of the unwillingness of our responsible officials to provide a central department of production, there was but one agency, the Council of National Defense, which could bring about co-operative action, and it was well-nigh powerless to deal with the situation. The Council of National Defense is an investigating and advisory body. Its administrative powers are not great. Handicapped as it was, it none the less expended much time and effort in the attempt to bring order out of chaos. As early as April 7, 1917, it passed a resolution urging the maintenance of existing labor standards and existing industrial relations. Its Committee on Labor did much useful service in the development of sound public sentiment, in the formulation of acceptable standards of labor, in making inquiries concerning dangers

[1] By L. C. Marshall (see p. 180). Adapted from "The War Labor Program and Its Administration," *Journal of Political Economy*, XXVI (May, 1918), 430–34.

to labor arising from war conditions, in assisting in formulating laws and regulations with respect to social insurance and employment agency work, and in various other ways. It could not, however, deal administratively with labor in production.

No complete account of the Council's labor activities will be attempted. Their general drift may be sufficiently seen from the fact that late in August, 1917, a resolution for the appointment by the Council of a War Labor Board of five members was defeated by the narrow margin of one vote, a unanimous vote being regarded expedient in such a case. The dissenting vote on this resolution was not caused by opposition to a centralization of labor administration, but by a belief that our war administration already had a superfluity of boards. Experience had made it increasingly clear that the *bon mot* of one of the Cabinet officers was appropriate: "A board is long and narrow and wooden."

It is noticeable that the demand for some central agency in labor administration at this time centered primarily about the supposed shortage of labor. This same consideration was largely responsible for a later action of the Council of National Defense. On November 2, 1917, they instructed the Director

to undertake the following work, co-operating with the Department of Labor and other government agencies:

1. To determine present and probable future demand for labor in war industries.

2. To determine in connection with the Priorities Committee of the War Industries Board the relative priorities of the labor demand.

3. To arrange for the supplying of the demand through the Department of Labor or such other governmental or civilian agencies as can best meet the demand.

4. To determine the needs for dilution of labor including the introduction of women into industry and recommend policies to be followed in regard thereto.

This action resulted late in November in the establishment of the so-called Industrial Service Section of the Council of National Defense. By that time, however, the true character of labor problems in war production had been more clearly revealed. At the request of the chief of the Industrial Service Section its activities were permitted to take the form of: (*a*) co-operating with others in promoting the development of a United States Employment Service in the Department of Labor; (*b*) co-operating with others in bringing to

pass a unified labor administration which would have executive rather than consulting power and would be concerned with the whole range of problems involved in the control of labor in production.

It is of course highly desirable that the administration of war labor matters should be closely connected with the production of war materials. Since, however, this was for many reasons not feasible in the earlier stages of our war activities, the question arises whether labor agencies which were not directly connected with production might not have stepped into the breach. The chief agencies of this character were the state bureaus of labor and the federal Department of Labor. The state bureaus of labor could at the best deal with the problem piecemeal as it appeared within the borders of the individual states. Even within this circumscribed field their usefulness was not great. Typically, they have not been organized on the basis of an appreciation of the part labor plays in production. Rather, their organization has been formulated in vague terms of labor welfare. Several of these state bureaus have indeed done excellent work in inspection of labor conditions and in maintenance of proper labor standards among our war industries. Both because of geographical isolation and because a sense of team play has not developed among them, it was inevitable that they should fall far short of meeting such national problems as those involved in securing an adequate supply of labor, providing housing, regulating wages, and adjusting labor disputes.

The federal Department of Labor was also not in a position to render great service. Its enabling act provided for a department whose duty it would be to "foster, promote, and develop the welfare of the wage-earners of the United States." This was a large order, and could be carried out only provided proper instrumentalities were furnished. In actual fact, however, the Department of Labor was made up of a somewhat miscellaneous collection of bureaus which had been taken out of the parent Department of Commerce and Labor, placed under a new administrative control, and metamorphosed by the magic wand of congressional fiat into a new department. Its administrative organization was in no sense comprehensive of the entire field of labor in production. Its funds had been meagerly provided by a somewhat suspicious Congress. Its support, both by the business world and to some small extent by the labor world whose interests it was designed to safeguard, had been lukewarm. Even if this department had been commissioned at the outset to supervise

labor in war production it could not have done so successfully except on the basis of a complete reorganization of the department. In point of fact, it was not so commissioned. Its activities in war production were sporadic. It co-operated with the Council of National Defense; its Secretary was the chairman of the President's Mediation Commission; it took steps to bring into existence the United States Employment Service; it performed many helpful functions; but, speaking in general terms, the department could not properly be said to be operating on a war basis. It was far from occupying a position of leadership in war labor administration.

There could be no hope that in the absence of administrative agencies dealing competently with labor matters a satisfactory solution would somehow "emerge" because of the "general drift of things" or by force of "public sentiment." The competitive striving of contractors of government production departments, the unrest attendant upon war conditions, and the lack of general knowledge concerning the war program of the government, if indeed such a program existed, made it hopeless to rely upon any "general drift of things." As for "public sentiment" with respect to labor matters, we have in this country unity of opinion neither with respect to the proper goals of industrial relationships and labor control nor with respect to the roads which should be taken to reach those goals. Our industrial history in such matters has been guided by individualistic opportunism. There is no person or group of persons who can speak with an authoritative voice for labor as a whole; no person or group of persons whose findings would be accepted by capital as a whole; no person or group of persons whose leadership would be acknowledged by the public. We drift, and our drifting is attended by suspicions, jealousies, and irritations derived from labor contests of the past. Not only is well-informed public sentiment on labor matters lacking, but also there is in the individual industrial plants a lack of local machinery adequate for carrying out a national labor policy from whatever source such a policy might spring. Shop committees, employment managers, welfare divisions, scientific management, etc., have not been developed to the point where they meet the needs of the case. A survey of the situation would convince the most pronounced advocate of *laissez faire* that his dogma is not applicable to the needs of the case.

Meanwhile, the various production departments of the government were not in a position to accept the situation gracefully. Results were demanded of them. It was not merely that congressional

inquiries loomed in the not-distant future. A more significant fact appeared in the steadily accumulating evidence that paper contracts did not necessarily mean soldiers clothed and fed and equipped for fighting, and that unless effective steps were immediately taken to check the growth of industrial disputes, of labor turnover, and of general demoralization of the productive power of labor, adequate industrial support would not be available for the armies on the Western Front. In the absence of centralization of production, in default of administrative control of labor in production, in the dearth of sound national sentiment on labor matters which would cause effective utilization of our labor resources to emerge automatically, our production departments saw no course open to them but to take charge of the situation themselves.

Their first actions combined a groping for a national labor policy through a series of agreements with organized labor and the establishment of adjustment commissions to cope with industrial disputes. The names of these commissions with the dates of their development tell much of the story. The list includes: National Committee on Mediation and Conciliation of the Labor Committee of the Council of National Defense; June 19, 1917, Cantonment Adjustment Commission (includes cantonments, aviation fields, and storage facilities; similar arrangement for similar construction by navy); August 15, 1917, Arsenals and Navy Yard Wage Commission; August 24, 1917, Board of Control of Labor Standards in Army Clothing; August 25, 1917, Shipbuilding Labor Adjustment Board; August, 1917, National Adjustment Commission (longshoremen disputes) with local adjustment commissions; September 19, 1917, President's Mediation Commission; September 26, 1917, Harness and Saddlery Adjustment Commission.

It is not without significance that these production departments deemed it worth while to set up adjustment commissions independent of the Mediation and Conciliation Service of the Department of Labor and that the Department was represented on only two or three of these commissions. Their work has been on the whole well done. They have not been able to act on the basis of any uniform national policy, for no such policy exists. Herein has been the main defect in their work.

There is far more involved in the administration of labor in production than the satisfactory adjustment of industrial disputes. Indeed an ideal administration of labor would so care for the other

elements of the situation as to prevent the emergence of industrial disputes. To cope with these other elements of the situation, the production departments began to establish Industrial Service Sections. The earliest of these was established by the Shipping Board; the second by the Ordnance Department; and similar agencies, though they do not bear the same name, have been established, or are reported to be in process of formation, in the Navy, the Quartermaster Corps, the Construction Division, and the Aircraft Board.

These Industrial Service Sections represent a correct industrial philosophy in that they are parts of the production departments themselves and can thus deal with conditions of labor, housing, training, etc., from the point of view of war needs and war production. They have themselves, however, felt keenly the difficulties of their situation. The administration of labor is not an ordnance problem, not a quartermaster problem, not a shipping problem—it is a national war problem. Perfect administration within the confines of any one or of all the production departments does not suffice. There remains a need of a centralizing agency which can harmonize all administrative policies, administer labor in production in industries essential to war work although they may not have direct contracts with the government, and care for those aspects of labor administration which are broader than the work of a single production department, such as the procurement and the distribution of the supply of labor, the maintenance of a balance of wage rates, the provision of adequate housing, and the development of sound public sentiment. Early in December the production departments themselves reached the conclusion that their situation with respect to labor control was an intolerable one and that unification must occur. Projects for war labor boards in the Council of National Defense had come to naught. Dinner gatherings of persons in charge of labor administration in the various departments availed little. Leading production officials accordingly sent an informal request to the Council of National Defense that it assume the leadership in bringing about definite unification of labor administration.

II. EVENTS LEADING DIRECTLY TO THE AUTHORIZATION OF A COHERENT LABOR ADMINISTRATION

Acting on the informal request of the production departments, the Council of National Defense appointed a so-called Interdepartmental Committee, made up of representatives of the main producing

departments. It asked this committee to survey conditions and to recommend a course of action.

Little time was spent by the committee in a survey of conditions which were notorious. Its major efforts were expended upon an analysis of corrective measures and a consideration of the agency appropriate to conduct a national labor administration. As will be apparent from a reading of its report, much progress in thinking had been made since the day of the projected war labor board of the Council of National Defense. It had become clear that (*a*) in some manner there must emerge a comprehensive national labor policy, (*b*) which must be administered on a national scale by a well-rounded labor administration having executive power. With respect to the agency appropriate to carry on this administration, much discussion took place within the committee. The possibilities of the case were numerous, but they narrowed down to four main ones.

There was in the first place the possibility of establishing an agency corresponding to the British Ministry of Munitions, which would bring under one control all the procurement and production activities of the government. Administration of labor in production would in this event—and properly—become a bureau or phase of the Ministry of Munitions. The logic of accepted principles of business administration pointed very definitely to some such solution, as did also successful British experience. It was known, however, that our national administration was definitely, and apparently irrevocably, opposed to such a solution, and it seemed reasonably clear that a proposal for the American equivalent of the British Ministry of Munitions would result solely in bickering and delay.

Passing to the other extreme, there was the possibility of attempting to solve the problem by means of a board or a committee made up of the persons already in administrative charge of labor matters. Both Washington and the country at large, however, had by this time had a surfeit of boards, and the proposal of a war labor board of this type received scant consideration.

A third possibility lay in an extension of the powers of the Department of Labor. In this department the nucleus of an administrative agency was already in existence, one that had the confidence of both the organized and unorganized labor of the entire country. It could be urged against this solution, however, that the Department of Labor was not in close touch with production activities and that it was viewed with some suspicion by a considerable section of the business

community. Some question arose also concerning the wisdom of having the later years of peace administration of the department prejudiced by an association with the jealousies, strains, and possible failures of war administration.

The fourth possibility was that of a separate war labor administration, comparable to the food and fuel administrations. This solution received the approval of those who felt that it would increase the confidence of the business world if the administration were divorced from the Department of Labor. It seemed probable, however, that this gain would be more than offset by the loss resulting from the disapproval of labor. Furthermore, the President's sense of loyalty to his subordinates and his known attitude on labor matters made it seem probable that he would insist on the war labor administration being in the hands of the Department of Labor.

The report of the committee as finally made, on December 20, 1917, to the Council of National Defense is worth reproducing in full, for it indicates in concise form the nature of the problem.

A

Your Committee is of the opinion that the present method of dealing with labor problems which arise in connection with the Government's war activities is not satisfactory; and for the following reasons:

1. At present each department of the Government is, with a few exceptions, dealing with its own labor problems irrespective of what is done by other departments. As a result (*a*) there is much duplication of effort; (*b*) there is no uniformity of policy or procedure; (*c*) there is much conflicting action.

2. Each department competes against all other departments for essential skilled labor. Contractors and sub-contractors engaged on Government work are using every means at their command to draw essential skilled labor away from one another. By this means labor turnover is multiplied and men are kept moving from job to job in certain industries for higher pay.

3. There is as yet no adequate system for dealing promptly and uniformly on a nation-wide basis with labor disputes affecting war work. The result is an increasing labor unrest.

4. To allow this situation to continue will, in our opinion, diminish the country's production and eventually paralyze industry.

B

Your Committee is of the opinion that action should be taken along the following lines:

1. In order to allay industrial unrest and to create a spirit of real cooperation between labor and capital during the war, it is essential that

excessive war profits be wholly eliminated; and that the Government's policy in regard thereto be sufficiently uniform so that the wage-earner can be satisfied that profiteering no longer exists.

2. A series of understandings concerning certain underlying principles affecting labor should be arrived at between representatives of employers, employees, and the Government. The following are some of the questions which should be considered in such conferences: basis for wage determination, strikes and lockouts, piece-work prices and price fixing, method of eliminating improper restrictions on output of war material from whatever cause, practice to govern dilution of labor, discrimination against union and non-union men, admission of union agents to plants, method of promptly adjusting disputes at their source through boards containing equal representation of employers and employees, right of workmen to organize.

3. A coherent labor administration in accordance with principles to be determined as set forth above should be established to deal with all labor problems arising in connection with war work.

C

There is as yet no consensus of opinion as to what means or agency shall be used to secure this coherent labor administration. The following are the outstanding suggestions:

1. A co-ordinating war labor board, either under or divorced from the Council of National Defense, to which the various existing agencies shall delegate powers. This seems to your committee too loose an organization to meet the emergency.

2. A very great extension of the activities of the Department of Labor.

3. The establishment of a department of production, which, along with its other duties, would take charge of the appropriate aspects of labor administraiton. Such a department would co-operate with the Department of Labor in securing coherent administration of the whole problem.

Action on the report of the committee was deferred by the Council of National Defense until the return of the Secretary of Labor, who was at that time in the West with the President's Mediation Commission. On January 3, 1918, the report of the committee was taken up by the Council with the Secretary of Labor present, and the Secretary of War, the presiding officer of the Council, was instructed to present the matter to the President of the United States for his favorable consideration. The President approved the program, and on January 4 asked the Secretary of Labor to take steps to organize a war labor administration.

Responsibility had at last been located. It remained to be seen whether the coherent labor administration authorized by the President

would be linked properly with the administration of production. It remained to be seen whether an organization could be evolved which would really enable the Department of Labor to "deal with all labor problems arising in connection with war work." None the less, the highest executive authority had taken the question of labor administration under consideration, had decided that unification was necessary, and had designated the agency to bring about this unification. From this time forth responsibility for lack of unification could be placed definitely at the door of the Secretary of Labor. He was called upon to provide the coherent labor administration. If he could not provide it, he must make clear the forces preventing his doing so in order that the Chief Executive might seek other solutions for the difficulties.

THE WORK OF THE ADVISORY COUNCIL TO THE SECRETARY OF LABOR

The Secretary of Labor at once took up the matters intrusted to his care. He called to his assistance an Advisory Council, which he requested to suggest plans and personnel for organizing the new work. A very brief survey of the situation convinced the Council that the nation required (*a*) a definite national labor program (*b*) which could be executed through effective mechanisms in industrial plants (*c*) on the basis of sound public sentiment (*d*) by an efficient labor administration. The two essential features of this requirement were the definite national labor policy and an efficient labor administration. Given these, the other elements might reasonably be expected to be called into existence. Lacking these, everything was lacking.

In view of this situation it seemed to the Advisory Council that its first task was that of providing, as well as might be, for the emergence of a national labor policy which would have the possibilities of being acceptable to labor, capital, and the public. On January 19, three days after they began their work, the Council presented to the Secretary of Labor the following memorandum:

> The Advisory Council recommends to the Secretary of Labor that he call a conference of twelve persons representing employers' organizations, employees' organizations, and the public, for the purpose of negotiating agreements for the period of the war, having in view the establishment of principles and policies which will enable the prosecution of production without stoppage of work.

The Advisory Council recommends that this conference body of twelve be composed as follows: Employers' organizations, as represented by the National Industrial Conference Board, are to name five employers, and these five are to select a person representing the general public. Employees' organizations, as represented by the American Federation of Labor, are to name five representatives of labor, and these five are to select another representative of the general public.

The Secretary approved this memorandum, issued an appropriate call, and brought into being the War Labor Conference Board.

The Secretary also approved a later recommendation of his Advisory Council in which it pointed out that a labor policy must be a growing thing, changing with the requirements of various situations, meeting the needs not merely of war but also of the reconstruction period; and in which it urged the selection of a person who, in cooperation with the Secretary of Labor, would serve as a planning agency in formulating and steadily developing the national labor program. The Council pointed out that such a person should be an investigator, with ability to administer investigations, who had a vision of the service the Department of Labor might render in leading the way to a new order in industrial relationships.

Turning now to the other features of the war labor administration, in memoranda dated January 17 and 19 the Advisory Council presented to the Secretary of Labor recommendations (which he approved) that he appoint "as soon as it might prove feasible" directors of the following divisions of the work:

A. An Adjustment Service which will have to do with the adjustment of industrial disputes according to policies and principles arrived at through the deliberations of the War Labor Conference Board.

B. A Conditions of Labor Service which will have charge of the administration of conditions of labor within business plants.

C. An Information and Education Service which will devote itself to the establishment of sound sentiment among both employers and employees and to the establishment in individual plants of the local machinery [e.g., employment management] and policies necessary for the successful operation of a National Labor Program.

D. A Woman in Industry Service which will meet the problems connected with the more rapid introduction of women into industry as a result of war conditions.

E. A Training and Dilution Service which will administer such training and dilution policies as may be agreed upon.

F. A Housing and Transportation of Workers Service whose duty it will be to provide the housing facilities to meet the nation's needs.

G. A Personnel Service whose duties it shall be to assemble and classify information concerning appropriate candidates for positions in the war labor administration and make recommendations for appointment.

H. A Division for the Investigation of Special Problems which would be a part of the Secretary's office force and would conduct investigations in the placing of contracts, in priority of labor demand, in powers of the Department, in problems of reconstruction, and would assist in formulating the national labor policy.

I. An Investigation and Inspection Service to provide the field force of examiners and inspectors required by the other services.

As has been said repeatedly, a war labor administration which would be divorced from production would accomplish little or nothing. The Advisory Council accordingly took up as its next task the relating of the central war labor administration to the various production departments of government. On January 22 it sent to the Secretary of Labor a memorandum, which he approved, on the organization and administration of the new work.

Having thus blocked out the essential features of the new war labor administration and its connection with the production departments of government, the Advisory Council turned to (*a*) a consideration of the securing of funds to carry on the work; (*b*) a canvass of competent personnel; (*c*) a detailed consideration of some of the more important services, particularly the United States Employment Service; and (*d*) a study of the relationship of the new war labor administration to various other agencies of government, such as the committees and sections on labor of the Council of National Defense, the United States Employees' Compensation Commission, the Committee on Education and Special Training of the War Department, the War Service Exchange, and the Federal Board for Vocational Education.

The securing of funds was of course of most pressing importance. It involved by way of preliminary work (*a*) a survey of the problems which would have to be met by each service, (*b*) a study of the plan of organization which would make it probable that the service could meet these problems successfully, (*c*) the preparation of organization charts for the various services, and (*d*) an estimate of the personnel required and of the expense involved. These matters were canvassed as rapidly as might be, experts in the various fields being called into conference for counsel and criticism. It seemed to the Council that

in view of the pressing character of the emergency, it would be proper for the President of the United States to grant from his emergency fund money sufficient to initiate the various services and to maintain them until Congress should have provided the funds for their continuance. This did not seem to the President expedient. It became necessary, therefore, to proceed on the basis of securing the funds by new Congressional appropriation. It was February 8 before the Advisory Council was able to lay before the Secretary of Labor a draft of a letter to be sent to the Secretary of the Treasury transmitting estimates for the appropriations needed for the rest of the fiscal year 1918, and for the fiscal year 1919. After further study and revision, these estimates were sent to the Secretary of the Treasury and by him transmitted on February 15 to the Speaker of the House of Representatives. The sums asked for were exceedingly modest, the Council reasoning that Congress would be more or less continuously in session and that a modest initial appropriation would enable the installation of the new services. Congress could later provide for them according to their demonstrated merit.

Little need be said concerning the relationships of the new labor administration to the outside agencies previously mentioned. Conferences which the Council held with these outside agencies made it abundantly clear that there was small probability of friction arising, or, stated positively, that there was every reason to suppose that a division of labor which was satisfactory to all could readily be worked out. The committees and sections on labor of the Council of National Defense constituted the most puzzling problem. These agencies had done excellent work, but the question arose whether the continuance of advisory agencies was advisable after an executive mechanism had been provided. The decision finally reached was that an appropriate solution of this matter could be made only after the new war labor administration had become an actuality through receiving adequate appropriations from Congress.

On March 5 the Council presented to the Secretary its final memorandum, dated March 4, the significant recommendation of which, aside from those already covered, was as follows:

> A departmental agency fitted to furnish the driving force which will secure efficient execution of the war labor administration should be provided. It is clear that the Secretary is already overburdened with the regular administration of the department, and the Advisory Council feels strongly that the Secretary should himself continue to administer the adjustment

work, which will presumably increase in scope and in demands on the Secretary's time. Unless an able administrator can be found who will give his full time to the general supervision (under the Secretary) of these war labor matters, it is the judgment of your Advisory Council that the venture will not achieve its full measure of success.

The person to assume this responsibility must have, above all, vision and administrative capacity. Possessing these, the other attributes will follow as a matter of course. He must be able to command the respect of the members of the Policies Board and must be willing to assume responsibility and authority. His position will be an impossible one except with the most cordial support of the Secretary. For, without formal title, he would be asked to perform under the Secretary the duties of a War Labor Administrator.

The course of events up to March 5 might very naturally lead one to conclude that within two or three weeks' time a unified labor administration would come into actual operation. As a matter of fact, nothing of the sort happened and the situation as it stands now (April, 1918) is both curious and uncertain.

From the point of view of the Secretary of Labor the matter probably resolves itself into two main considerations: first, will he be able to secure from Congress the funds necessary to carry on the war labor administration? second, will he be able to organize under his jurisdiction an effective administration and be able satisfactorily to correlate it with the Industrial Service Sections now operating in the production departments? On both of these points he must have his misgivings, but certain considerations indicate a successful outcome if he assumes a position of vigorous and efficient leadership.

Notwithstanding the fact that the appropriation bill has slumbered peacefully in Congress for two months, it is difficult to believe that the necessary funds will not be forthcoming. There is no denying the existence of an undercurrent of ugly feeling in Congressional circles over the entire labor situation. Such a feeling could easily develop out of the memories of labor controversies of the past, the lack of well-informed public sentiment on labor matters, the very real demoralization of labor which has occurred in some cases, and the grossly misleading reports which have been circulated concerning labor difficulties. There is also no denying that requests coming from the Department of Labor are viewed by a considerable section of Congress with misgivings, if not with actual hostility. This section cannot down its fears that the Department of Labor will be more concerned with labor welfare and "uplift" than it will be with the best utilization of our national resources by a sound administration of labor in

production. This section alleges that requests made by the Department of Labor in the past have not been properly supported with reasons why they should be granted, and it further alleges that the administration of the Department has been wasteful and ineffective. It is not clear that these allegations are the real substance of the difficulty. They savor of being excuses rather than substantial reasons. It is, furthermore, not clear that the attitude of this group properly reflects the attitude of Congress as a whole.

Congress cannot avoid being influenced by the fact that the request for a war labor administration administered by the Secretary of Labor did not emanate from the Secretary. The issue was raised originally by the production departments—the Council of National Defense recommended that the coherent labor administration be under the charge of the Secretary of Labor, and the President of the United States issued an order to that effect. The President has since issued a formal proclamation creating the National War Labor Board, which is one phase of the Secretary's scheme of administration. It will be difficult to refuse an appropriation under such circumstances. Indeed, Congress has already committed itself to a considerable extent. It has appropriated for the current year $250,000 for the ordinary administration of the United States Employment Service and has given the service an additional $250,000 as a "rotary fund" to provide transportation for war workers. The House of Representatives has passed a bill for $50,000,000 to provide housing facilities, with the full knowledge that the complete administration of this fund would be in the hands of the Secretary of Labor and that an understanding existed by which he was to play a large part in the administration of the $50,000,000 housing fund already appropriated for the uses of the Shipping Board. Having gone this far, Congress will be disinclined to turn back, particularly since a strong case can be made for the necessity of a central labor administration and for the adequacy of the central labor administration which the Secretary of Labor has devised. It is worth noting in this connection that even if Congress should fail to pass the specific appropriation bill herein referred to, but should pass in satisfactory form the so-called Overman Bill, which is now pending, power would be given to the President of the United States to carry out his order of January 4 authorizing the Secretary of Labor to set up a national administration, by transferring to his jurisdiction the requisite agencies and instrumentalities.[1]

[1] Ed. Note.—The Overman Bill was subsequently passed.

2. THE HISTORY OF THE WAR INDUSTRIES BOARD[1]

I. ANTECEDENTS

To trace the history of the War Industries Board it is necessary to go back to the beginnings of the Council of National Defense and its Advisory Commission, under whose legal authority the Board was first organized and of which it is still technically a part. The Council of National Defense and Advisory Commission, it will be recalled, were created in a section of the Army Appropriation Act approved August 29, 1916. In general, the Council was to study the industrial and transportation systems of the country and make recommendations as to the methods by which they might best be utilized in case of some possible future war. The members of the Advisory Commission were appointed in October of that year. Yet it was not until March 3, 1917, that the Council was fully organized. By this time any idea of carrying out the letter of the enabling act by conducting a long-drawn-out survey of American industry had gone. The time was too short. Immediate action was vital, and while the Commission was not designed as an executive body, the law creating it was elastic enough to permit a great deal of successful effort toward bringing industrial organization in touch with the government through the several departments represented in the Council of National Defense.

The Commission divided itself into seven committees, representing respectively transportation and communication; munitions and manufacturing (including standardization); supplies (including clothing); raw materials, minerals, and metals; engineering and education; labor; and medicine and surgery (including general sanitation). Under this arrangement the Commission constituted itself an informal advisory industrial cabinet—in a sense the first agency in the government to devote itself to the war industrial problem as an entity—with each member serving as a point of contact between the particular form of activity with which he was charged and the several government departments.

Yet as the war continued, increasing experience began to show weaknesses in the design of the Council's structure as applied to the new and unexpected task which confronted it. In the supply problem

[1] By Curtice N. Hitchcock. Adapted from "The War Industries Board. Its Development, Organization, and Functions," *Journal of Political Economy*, XXVI (June, 1918), 545–66.

Ed. Note.—Mr. Hitchcock was Assistant Secretary of the Council of National Defense during the first year of the war.

the bureaus and departments of the Army and Navy, organized on the old hard-and-fast lines established through generations of peace-time bureaucratic habit, naturally tended each to attempt to meet its own needs in its own way with little or no concerting of effort even when several needed large amounts of the same form of supplies. These purchasing bureaus early began commissioning civilians to meet the great need for increased personnel, but this seldom affected the systems under which they were managed. Certain of these bureaus, directed by capable officials, handled their own individual problems unusually well. The fundamental weakness in the whole situation was not so much the individual incapacity displayed in a few instances by bureau officials as the lack of cohesion in the whole governmental system which prevented the adoption by all bureaus of a single policy toward industry.

II. THE GENERAL MUNITIONS BOARD

The earliest manifestation of weakness in the iron-clad separation of bureaucratic functions displayed itself through a general tendency on the part of the purchasing bureaus to bid against each other for all kinds of supplies and materials, with the result that those which had the most forceful personnel got the most effective results without regard to the relative importance of the work each had in hand. It was probably this tendency as well as the need for planning for the production of many forms of munitions entirely new to the War Department that inspired the creation of the General Munitions Board, the first of the attempts at a co-ordinating agency to draw the various departments and bureaus together for common planning. The somewhat earlier Munitions Standards Board, constituted for the purpose of standardizing specifications and tools for munition manufacturing, was soon absorbed by the larger body.

The General Munitions Board was composed of seven representatives of the Army, nine of the Navy, the chairmen of the Advisory Commission Committees on Supplies, on Raw Materials, on Manufacture, and on Medicine, and the chairman of the National Research Council. In the words of the annual report of the Council of National Defense, "The efforts of the General Munitions Board were directed toward co-ordinating the making of purchases by the Army and Navy, and assisting in the acquisition of raw materials, and establishing precedence of orders between the Departments of War and the Navy, and between the military and industrial needs of the country." Its

activities included developing sources of supply for almost every form of munition from rifles, ordnance, and shells to optical glass and gauges. It set up sub-committees which contributed invaluable aid to the construction of cantonments and the provision of storage facilities. It gave particular attention to collective consideration of price questions. Yet inevitably from its size, its indefinite powers, and its loose organization its functions were more judicial than executive. The power of decision rested in the whole board rather than in the chairman, which necessarily detracted from the driving force of the organization. In practice this scheme proved unwieldy, slow, and inadequate. The General Munitions Board began work on April 9. It lasted until July 28, when it was superseded by the War Industries Board, Mr. Scott remaining as chairman.

III. THE WAR INDUSTRIES BOARD: FIRST PERIOD

The War Industries Board which succeeded the General Munitions Board avoided some of the more obvious weaknesses in the old organization. It was made up of seven instead of twenty-odd members, all civilians with the exception of one representative each of the Army and Navy. Many loose ends were thus drawn together, and the new Board was much more nearly an active planning board for industry than anything which had preceded it. Yet regarded as an industrial cabinet it still occupied a very anomalous position. Its hazy authority could be checked in many directions. As a subordinate body of the Council of National Defense it very definitely lacked power to take the initiative in industrial policy. It was still a clearing-house rather than a directorate. Again, looked at from the point of view of effective administration, such authority as it possessed, whether delegated by members of the cabinet or assumed through the prestige of its position, was vested in the Board as a whole rather than in the chairman, just as in the case of the General Munitions Board, with a resultant loss in driving force. Finally, as in the case of the latter Board, its decisions could be nullified, not only by the heads of the executive departments of the government, but also by chiefs and even subordinate officials of the purchasing bureaus, in whom statutory responsibility and power over contracts still rested. The bureau chiefs were subject constantly to a dual responsibility—their legal responsibility to the heads of their departments, and at the same time their hazy dependence for guidance on the War Industries Board.

The board was still a "co-ordinating" body which depended for its effectiveness on the co-operation and consent of individual bureaus, and their unwillingness in many instances to accept its leadership was frequently a source of embarrassment both to the government and to industry. Aside from questions of policy the Board's lack of a definite status frequently produced unnecessary confusion in the mechanics of the dealings between manufacturers and the government. In a sense charged with supervision over production, the Board often found itself compelled to refer producers to individual bureau heads for information and direction even in questions involving several of them alike. While many of the threads of industrial activity converged in the Board, others remained unfocused.

IV. QUESTIONS OF PRICE AND PRIORITY

The War Industries Board early set up an organization under Judge Lovett to decide questions of priority in production among the purchasing departments, and the Priorities Division of the Board was able to do much effective work toward eliminating conflict in war orders between the several departments and the Allies. Yet, especially in the earlier months of its existence, it was much hampered by special priority orders issued by individual production departments, particularly the Quartermaster Department, which in its eagerness to expedite shipment inaugurated its own special system and caused a great deal of confusion before the plan was finally abolished.

Yet the difficulties of establishing an effective system for administering priorities in production were largely of a mechanical nature. The much larger problem of determining priority in delivery as between military and non-military needs, between food and fuel and guns, between steel for merchant ships and steel for destroyers, and between guns for the Navy and guns for the Army, involving the whole question of large war strategy, was not vested in the Board, nor indeed vested anywhere definitely short of the President.

In the words of the statement issued by the Council of National Defense creating the War Industries Board, the Board was to "consider price factors." The actual form which its "consideration" took through the period from July 30 to March 4 was a series of agreements with the national representatives of various branches of industry on the price to be paid for their products. The price was to be charged alike to the American government, the public, and the Allies. While negotiated through collective bargaining, naturally

these agreements had all the force of a price-fixing law, and they illustrate perhaps better than any other of the activities of the Board its tendency to become a central, executive, industrial planning board. It should be noted as further illustrating its trend that in each case the President's definite approval was secured before the price was adopted, making the Board here the direct agent of the President rather than of the Council, securing in this way the agreement of the several purchasing departments to the price determined upon, and giving the Board as an ultimate weapon in bargaining the power of the departments to commandeer.

Yet in spite of the extensive character of the Board's organization as it existed in the spring of 1918, and its contact with almost every conceivable phase of production and purchasing, it was still very largely what it had been when it was created in July of 1917, what the General Munitions Board had been, and what the germs of both organizations had been in the days of the early miscellaneous advisory committees of the Council—a supplementary agency without authority to assume leadership or control policy. It fixed prices on certain commodities, administered priority, acted as a clearing-house, and performed certain delegated purchasing functions, but that was all; initiative still rested with the departments.

V. THE WAR INDUSTRIES BOARD: REORGANIZED

When on March 4 of the present year the President appointed Bernard M. Baruch chairman of the War Industries Board and defined his duties he did not, as certain press reports have implied, create an industrial dictator. His action did clear the way for Mr. Baruch's assumption of the duties of a director of industrial war strategy, of an industrial chief of staff—for the present position of the War Industries Board in the American government is comparable in its relation to national industrial policy to nothing so much as the functions of the general staff of the Army in its jurisdiction over military strategy. After a year of war the direction of industrial policy is placed in single hands, and a central planning board is established for dealing not only with the problems of production and purchase but with the whole attitude of the government toward the mobilization of business resources for the prosecution of the war. Leadership has been focused and an administrative channel opened for the inauguration of a studied and inferentially constructive industrial policy.

The great advance which this step marks is the definite fixing of responsibility for the administration of such a policy. It is yet somewhat early to judge whether the powers of the reconstructed organization will be commensurate with the responsibility. Although the President's letter to Mr. Baruch conferred seemingly far-sweeping powers, existing legislative barriers still make many of those powers dependent in greater or less measure on the co-operation and consent of the existing departments and bureaus of the government. Unwillingness and delay in granting such consents on the part of departmental agencies during the past year have hampered and even wrecked some of the organizations which the newly constituted War Industries Board has supplanted. The first six months of the war produced indeed a constant succession of experiences with the unwillingness of bureau officials to relinquish in any form the responsibility and powers, especially for placing contracts, which were theirs by congressional enactment. The interdepartmental committees, munitions boards, and like agencies which sought to draw together for common planning the scattered and apparently conflicting interests of the production and purchase bureaus which had to deal with industrial problems each encountered the same handicaps.

Varying in the ingenuity of their structure, these co-ordinating boards fell alike before the fundamental weakness that their common action and their power depended on the voluntary delegation of authority by bureaus inspired with a spirit of competition in efficiency which transcended their desire to work together for a common cause. This is said in no spirit of undue criticism of the men who composed them. It is undoubtedly too much to expect of human nature that an official charged with the detailed administration of a separately constituted government agency should be able to regard the problems of a brother-official as of equal urgency with his own. The British experience in the early days of the war with "groaning cabinets"—planning bodies intended to undertake executive action, but composed of officials each charged with administrative duties and thus with special interests—was not far unlike our own. An executive arbiter with the final voice on all decisions is alone able to prevent such bodies from becoming mere disorganized debating societies.

Yet there are at least three excellent reasons for predicting more effective results from the War Industries Board as now constituted. The first is that the President, far more definitely and emphatically than before, has thrown the vast prestige of his office behind the

agency and has delegated to Mr. Baruch in no uncertain terms many functions of an extra-legal but widely extended character which the presidency has gradually assumed during the past fifteen years and especially since the beginning of the war. This in itself is a guaranty that the influence of the War Industries Board will be determined by no narrow legalistic interpretation of its powers.

The second is that, with the exception of its functions in the determination of prices, the final decision as to the action of the Board is vested by the President in the chairman exclusively instead of as hitherto in the Board as a whole. This gives hopeful promise of quick and decisive action and opens the way to a courageous and effective assumption of leadership by the man to whom he has delegated the functions which his letter defines. While it may yet be too soon to reach a conclusion, the methods adopted by the new chairman and his choice of assistants so far show no reason for questioning the confidence which the President has placed in him, and with that whole-hearted confidence behind him, as the American war government is now constituted, there seems little reason to doubt his ability to carry through any policy which he may decide to inaugurate.

Finally, the passage by Congress of the so-called "Overman" bill gives the President power to redistribute the powers of the executive departments in any way which he may wish, and undoubtedly makes available to the President the power to remove any existing legislative obstacles to the assumption of full control over governmental industrial policy by the War Industries Board and its investment with any or all necessary prerogatives now held by the several existing production and contracting bureaus and departments.

In the actual machinery of the War Industries Board itself there have been and probably will have to be few changes. The Board as it now exists has under it special divisions and sections for handling particular supply problems, each in charge of experts. The Raw Materials Division has specialists for such materials as steel and its products, non-ferrous metals, chemicals and explosives, lumber, building materials, and the like, each with its complement of by-products. The Division on Finished Products and the Conversion of Industry includes such materials as cotton duck, machine tools, electrical equipment, optical glass, and a host of other things. Frequently of course the Board relies on the technical staff of one of the regular supply departments of the government for handling particular commodities.

Acting as the directing agency in the mechanism of the Board's organization is a "Requirements Division" composed of the heads of various sections of the War Industries Board, including the Priorities Division, and representatives of the Army, the Navy, the Emergency Fleet Corporation, the Food Administration, the Red Cross, the Railroad Administration, the Fuel Administration, and the Allied Purchasing Commission—practically all the government agencies which come in touch with the industrial field. To this agency the supply departments of the government furnish continually estimates of their future needs, keeping the division constantly in touch with the progress of their business, so that their requirements can be planned for far ahead. In turn the Requirements Division delegates to the proper division of the Board or to one of the supply departments itself, as the case may be, the task of meeting the need. Of this division the chairman of the War Industries Board is an ex-officio member and is thus constantly in touch with the daily progress of business, although not compelled to devote himself to the detailed administration of it.

Priority of production is administered as before by the Priorities Division, but a new agency has been set up by the Board for the administration of priority of delivery, of which Mr. Baruch is again an ex-officio member, and which includes representatives of all the executive departments and special administrations, such as food and fuel, which touch industrial questions, joined together for common planning. It will be noticed that this agency hardly yet meets the requirements for a general war priority board to determine the largest questions of national strategy and to join military with industrial strategy. These decisions apparently rest now chiefly with the General Staff of the Army if not directly with the President himself. Yet the new Priorities Board in the War Industries organization is a long step in the right direction.

Finally the determination of price is now vested in a special committee, of which Mr. Robert S. Brookings, of the War Industries Board, is chairman, and of which Mr. Baruch is again an ex-officio member. It includes General Palmer E. Pierce, member of the War Industries Board and Surveyor-General of Supplies for the War Department; Paymaster Hancock, of the Bureau of Supplies and Accounts of the Navy Department; Dr. H. A. Garfield, Fuel Administrator; F. W. Taussig, chairman of the Tariff Commission; W. J. Harris, chairman of the Federal Trade Commission; and Hugh Frayne, the labor member of the War Industries Board. The Price

Committee thus includes, officials having to do not only with the commodities particularly to be considered, but also the basic factors entering into a just price determination. This again is a decided step in advance toward fundamental planning.

VI. FURTHER CO-ORDINATION REQUIRED

From the present trend of events the War Industries Board promises to become the sole directing agency between the government and industry. Backed by the power of the President to commandeer, to withhold fuel, and in other ways to force the halting into line, it can mold the country's industrial system almost as it will—whether in organizing the nation for war or in directing the lines along which it shall return to normal conditions when peace comes. In a system of government such as ours, where the responsibility for directing the war rests almost exclusively in the hands of the President, and where his power ultimately becomes almost absolute, the Board has been shaped into a very potent instrument.

Yet powerful as it may become, subject only to the jurisdiction of the President, it is well to remember that in a comprehensive national war plan it cannot stand alone. Its policies must be subject to the administration's general strategy in the war—for instance, to the amount of munitions in comparison with the number of men or the amount of food that it wishes to send abroad at any given time. The munitions program and the conversion of industry to war purposes must be governed by the ultimate end in view. In addition, one of the great factors in production—the labor factor—is being administered by another government agency, and it is obvious that priority in the labor supply must go hand in hand with priority in materials.[1]

Finally the War Industries Board is now virtually directing the government's price policy. Statesmanship necessarily demands the most carefully studied relationship between prices and war finance. Great Britain, with her flexible parliamentary system, found her peace-time budget system easily adaptable to war and has been able to correlate her war taxation and her policy toward war profits. In the United States the responsibility for regulating prices—a "voluntary" but none the less effective system of regulation—has been assumed by the President, acting through the War Industries Board, while the ultimate responsibility for taxation rests exclusively with Congress, a constitutionally co-ordinate branch of the government.

[1] ED. NOTE.—Co-ordination here has since been accomplished.

VII

WAR-TIME REGULATION OF TRADE AND INDUSTRY

Introduction

With this chapter we begin a study of the more specific problems of economic control to which the war has given rise. The organization of all the resources of each belligerent with an eye single to military victory has required the development of elaborate machinery for the regulation of trade and industry.

The dislocations of trade that are occasioned by a war such as the present one extend literally "unto the ends of the earth." The war has revealed to the laymen, as no amount of theoretical statement could have done, the interdependence of the trade and industry of the world. Neutral as well as belligerent economic life has been profoundly affected. In the case of the neutrals, after a brief chill at the outbreak of the war, the enormous demand for war materials in the belligerent nations gave an unprecedented stimulus to industrial activity, which resulted for a year or so in prosperity which was fairly well diffused among the various classes. In time, however, as the energy of the world becomes more and more devoted to the arts of destruction, war casts its darkening shadows over neutral as over belligerent lands. The economics of an international division of labor based upon exchange disappear as soon as the control of trade and industry by contending powers renders free exchange no longer possible; and then there stands revealed the true significance of international economics.

The international exchanges (Section XXIV) present one of the most complicated problems of control. In normal periods the exchanges work automatically, but in time of war, the disruption of shipping, the practical cessation of foreign investments, the curtailment of gold movements, the enormous trade that is handled directly by governments on other than business principles, etc., require the development of an entirely new mechanism for regulating foreign trading and business operations.

The shifting of the world's gold supply (Section XXV) had profound effects in the United States long before our entry into the war. It facilitated a credit expansion that was perhaps of service in connection with the enormous expansion of business activity which European demands occasioned, but it was at the same time doubtless instrumental in causing a general rise of prices, and the social inequalities that accompany such an event. It is significant in this connection that the *total* of bank deposits in Japan has substantially increased during the war; but that the deposits of the masses have declined. Food riots and revolutionary propaganda are certain to be the eventual fruits of such unbalanced wealth accumulation. The re-allocation of the supply of gold at the end of the war also raises problems of extreme delicacy as well as of far-reaching importance.

What will be the ultimate results of the vast experimentation of government control of trade and industry which the exigencies of war have required? To what extent will it prove serviceable in the interests of peace? These queries inevitably present themselves here, though in the nature of the case they cannot now be answered. Chapter xiv, however, attempts a preliminary appraisal of some of the ultimate effects of this social experimentation and its relation to long-run national efficiency.

XXIII. Trade Dislocations

1. THE NATURE OF TRADE DISORGANIZATION[1]

The disturbance to industry which follows in the wake of war is international as well as national. In fact, the more a nation has depended upon others, the more likely it is to be seriously crippled by an attempt to meet new conditions. This disorganization cuts down the productive efficiency of the peoples who are not at war. We all know that in general goods are produced in the localities where favorable conditions make costs lowest, and that through a world-wide division of labor nations satisfy each other's wants. It has come about that the countries of Western Europe have specialized in the production of manufactured articles and have come to depend upon Russia, the Near East, the French and English colonies, and the two Americas for their raw materials and a large part of their food. In general, industry and business have been arranged upon the assumption that normal markets and means of communication are to remain

[1] An editorial.

open. By seriously crippling the communication upon which the division of labor depends the war is making specialization between nations more expensive. It takes away markets, increases the costs and makes difficult of purchase the materials essential to production, and robs of its effectiveness the contribution which the international organization of industry makes to the economy of production. Out of such maladjustments in economic organization comes a loss in economy of effort and in the use of resources which affect, along with the complementary processes of the industrial system, the sequence of acts which culminates in the production of the concrete commodities essential to the maintenance of health and efficiency and to the waging of effective warfare.

2. THE WAR'S EFFECTS IN NEUTRAL SCANDINAVIA[1]

To describe conditions in Scandinavia toward the end of 1916 is a difficult matter. It cannot be done with a few words or in a couple of lines. The picture which unrolls itself before one's mental eye is kaleidoscopic—it is a picture of many colors, a bewildering variety of human conditions, one entangled mass of political uncertainty, commercial aggressiveness, variations of financial responsibility, and social-economic development.

What is the general impression? The vague, but not altogether unsatisfactory one is that the people of the three nations are becoming somewhat more anxious than they were in the heyday of previous phases of war-time, that they seem to have a better judgment regarding the isolated economic situation of their countries and the necessity of careful movement in political affairs, perhaps, also that voices of the more sober tenor in the nations are now heeded more than in the past. The war has all the time been near. It was near enough to fear the worst in the beginning of the catastrophe. Then came the feeling of more certainty and the chance of making profit by courageous and able individual enterprise. This condition of things was soon followed by a practically insatiable demand for every kind of commodities and goods which enabled any man, so to speak, to make a fortune merely by selling at fabulous prices. The international shortage of tonnage made freights soar; shipping shares became attractive. A world of hitherto unknown chances opened to the ever present speculative trait in human nature. The ordinarily slow Scandinavian was quick

[1] By Fin Lund. Adapted from *The Americus* (February, 1917), pp. 5–7. Copyright by the National City Bank, New York.

enough to discover this; he bought and he sold, he promoted, and he ordered new ships.

These were the advantages of being so near the war, but little by little in the beginning, then by seven-mile jumps, the war closed in on the Scandinavian countries, the mailed fist made its stern pressure felt, and when Germany's note to Norway on the question of U-boats in Norwegian waters was presented war itself loomed large on the home threshold, and displayed its dreaded teeth at close quarters. The Allies would not allow goods to be imported "for the sole purpose of re-selling them to the Central Powers," and the latter, on their part, entertained the same point of view as to their products. Importations into Scandinavia were curtailed more and more rigorously.

Everything which could be sold had been sold in the beginning of the war. Now, because imports were falling off rapidly and also with due understanding of international exigencies, the Scandinavian governments started their policy of embargoing exports, so that at present hardly a thing can be sent out of any of the countries. The index of the Swedish official list of laws, dated October 31, 1916, forbidding exports, mentions more than 1,100 articles, and even that is expressly called only a help to find the commodity looked for and does not pretend to be a complete index. The result was, of course, that trade, compared to former volumes, decreased very considerably, and the energy as well as the wealth actually earned was turned towards speculation on the local exchange.

To supply all the people of Scandinavia with the necessities of life is a problem which is already exceedingly difficult to manage. Law upon law, one governmental decree after the other, tries to regulate the distribution of commodities as well as their prices. The majority of the people are in actual need. Prices soar, and it really does not matter to the ordinary man whether the cause of this rise in the cost of living is a too big circulation of paper currency or a limited supply of goods. What confronts him is the fact itself, not theories, and he realizes all too well that he cannot make "both ends meet." There is, generally speaking, no doubt that under normal circumstances the laws of supply and demand will work satisfactorily to the community and that artificial interference is only harmful. At present the supply is short, consequently the demand and the consumption must be controlled to secure a fair distribution. Sugar cards, which have been used in Sweden for months, and which were decreed in Denmark

to go into force January 1st, 1917, are an example of the means employed to control the distribution and to prevent waste of supplies.

While on the one hand one sees new millionaires permit themselves to indulge in the most senseless luxuries, which incidentally add considerably to the high cost of living under circumstances like these, the less well-to-do must actually go without many things formerly considered necessities. Collections of money and food-stuffs are now made all over Scandinavia to help the less fortunate through the winter. The poorer population of the cities is especially considered. It is even difficult to get a roof over one's head. Proposals and counter-proposals to remedy the evil are forthcoming, but no real remedy seems to be in sight.

3. GERMAN FOREIGN TRADE IN WAR TIME[1]

When the war broke out, the German ships were driven off the seas, traffic with over-sea countries became difficult; it was made impossible later on by the allied blockade. Trade with neutral countries was affected by numerous prohibitions against exportation issued both in Germany and in the neutral countries. Letters, newspapers, or other information from abroad could not be obtained currently, and thus a survey of market conditions became impossible. Domestic trade suffered when the public suddenly developed the practice of extreme thrift, some because their income had been reduced, others because the war had made them apprehensive and nervous. Trade also suffered from the irregularities of the transportation services, as all traffic would cease at times when large movements of troops were to be undertaken. The war, on the other hand, created an enormous demand for all goods serving directly or indirectly the purposes of warfare. The dealers in articles of luxury lost most of their customers, while the war trades prospered. Professional men saw their incomes dwindling. Raw materials and wares formerly imported on a large scale became scarce and their prices rose, while the warehouses were filled with articles intended for exportation which could not be sold until later. Many firms suffered from their inability to collect claims due them from foreign customers. As the war proceeded, and the prospects of victory diminished, the government gradually extended its control over both industry and trade.

[1] By Chauncey Depew Snow and J. J. Kral. From *Department of Commerce*, Miscellaneous Series No. 65, pp. 23–24.

Although many of the industries of Germany have succeeded in a large measure in adapting themselves to the new conditions, trade has found no opportunity for readjustment, and the merchant has suffered much more than the manufacturer. The former, as a class distinct from the producer, could be dispensed with, whereas the latter had indispensable work to perform for war needs. The imperial government and the state of Prussia are now the largest purchasers of goods, and they buy directly from associations of producers, the middlemen having been eliminated in most cases; many of them are walking the streets. The men who are selling syndicated products are not merchants; they are officials or employees of the producers, and protests have been made against their claiming membership on various boards as "representatives of the trade."

Trade with neutral countries increased considerably for a time, as they offered the only available medium for trade with foreign countries. This trade was gradually restricted and cut off both by the allied blockade and the growing needs of the neutrals themselves. Germany continued as a buyer of foodstuffs and raw materials; the neighboring neutrals required coal, iron wares, chemicals, and fertilizers from Germany in exchange.

XXIV. The International Exchanges

1. GREAT BRITAIN'S FOREIGN-EXCHANGE PROBLEM[1]

England, at the commencement of the war, was in far the strongest position of any of the Allies to purchase munitions and other materials from foreign countries both for herself and her Allies. She was in fact the greatest creditor nation in the world. France too was a powerful creditor nation, but not so powerful as England, and at the commencement of the war her export commerce received unfortunately a much more staggering blow than England's. While, therefore, France has made every possible effort financially, the greater burden fell to us. On the other hand, Russia and Italy were debtor nations, and even before the war had to borrow in order to balance their foreign account. Serbia was, of course, in the same position, and Belgium, too, has been in that position since the commencement of the war. All these nations have required assistance in making purchases abroad. From the commencement of the war, therefore, we have had to assist our

[1] By R. H. Brand (see p. 191). Adapted from an unpublished address before the American Bankers Association, September, 1917.

Allies as well as our Dominions in making foreign purchases, and have in these three years lent them not less than six billion dollars.

Consider England's position in 1913 as regards her balance of trade. In that year her imports were valued at $3,210,000,000, her exports at $2,560,000,000. But it has usually been estimated that England was owed about $1,610,000,000 annually by foreign countries for interest on capital lent, for shipping, freights, and for banking, insurance, and other commissions, etc. If this sum is added to her exports, then the total amount owed to her was $4,170,000,000 as against $3,210,000,000 which she owed for her imports. In other words, she had a favorable balance of about $960,000,000, which was lent abroad. She was therefore in a very comfortable position. The war, however, has altered that position greatly to her disadvantage.

The tonnage of our ordinary commercial imports has constantly been falling off since the commencement of the war and is now enormously reduced. Although the huge increase in prices has actually enormously increased the value of our imports and maintained that of our exports at nearly their pre-war figure, our export trade must in fact have been enormously reduced in tonnage, because it is mostly to South America and the Far East, and in order to provide tonnage nearer home all our ships have been taken by the government off these routes and brought to the North Atlantic. But the excess of commercial imports over exports is now about $1,950,000,000 a year instead of $630,000,000, altogether apart from our huge government imports.

It is impossible to say to what extent our earnings from freights, interest, and commissions have been affected by the war, but unquestionably they have not covered anything like the above extremely large debit balance. In consequence we have been obliged for very many months to take exceptional measures to maintain our exchange with the United States, from whom our chief purchases are made.

In fact, these unfavorable influences of the war began to tell very soon on our external position. Notwithstanding our drawing in, in the first months of the war, money which we had lying all over the world, which I believe amounted to a very large sum, and notwithstanding our great exports of gold, there was by June, 1915, a collapse in our American exchange, and it was clear that much more drastic measures to maintain it were required. These measures could only be the mobilization of all our liquid assets salable abroad; and since that date it may be said that we have carried through completely this

mobilization and placed those assets at the disposal of our Allies, so far as they were not needed to pay our debts.

In the first place, the United States has received in gold over $1,000,000,000 since August, 1914, of which the major portion must have been from the British Empire.

In the second place, we have taken the most drastic measures to insure that every holder of American securities, or indeed any other securities which we could sell or borrow against here, should either sell or lend such securities to the government. We have in fact, I think, drained our country dry of them.

While the exchanges between the Allies and nearly all neutral countries are depreciated, the exchange between New York and London has by means of the above measures been maintained practically at gold point to the very great advantage, not only of Great Britain, but of our Allies and also of the United States, and in fact of every nation, except our enemies, because all are interested in uninterrupted trade.

In peace time the exchanges find their own level. If a nation is living too extravagantly, the fall in its exchange will naturally tend to correct its extravagance, because imports tend to be restricted and exports to be encouraged. Naturally, if the exchanges are artificially maintained, that tendency ceases to operate. That is of course a disadvantage, but it would be more of a disadvantage if it were not that other and even stronger influences are restricting ordinary commercial imports into European belligerent countries.

I have already quoted the very striking figures of the tonnage of imports into Great Britain, which sufficiently prove that practically no imports are now being made except such as are absolutely necessary.

Of course no nation could permanently tolerate such unfavorable trade balances as those from which the Allies in Europe are now suffering. They can only do so now and keep their exchanges with the United States steady by borrowing immense sums here. But the war itself is not permanent, and the question is merely whether the present state of affairs can be continued long enough to enable all the enemies of the Central Powers to exert their full strength and win a final victory.

You will no doubt all have noticed that the credits granted Great Britain have been greater than those granted to any other Ally. The reasons are simple, though they are not, I think, generally understood. We have, in the first place, the largest war and munition program

of any Ally; in the second place, as I have shown above, we are, with the exception of the United States, the greatest industrial arsenal among the Allies; that necessarily involves large imports. We send a great deal of steel from England to our Allies; we have to replace it by steel from here. We make rifles for Russia; we have to import the steel to make them. We send boots to Russia; we have to import the leather needed. These examples might be multiplied many times. Thirdly, we extend large credits in England to our Allies, some part of which they may use anywhere in the world, and this part may ultimately come back on the sterling exchange in New York. Lastly, it is well known that neutrals who are owed money by England unfortunately find it convenient to utilize the sterling exchange in New York in order to recoup themselves in dollars. But so also do neutrals who are owed money by the other Allies. So long as we maintain the sterling exchange this appears to be inevitable, and the burden of financing both our own and our Allies' trade tends to fall on that exchange. It is by our maintenance of this sterling exchange that the continuance of our Allies' trade is rendered possible. The maintenance of the sterling exchange means the maintenance of the allied exchanges. All these factors together exert an immense influence. If England had had only herself to finance since the beginning of the war, and indeed even if she had only herself to finance now, it is quite possible she would not have needed to borrow at all abroad.

2. TRADE AND "FINANCIAL" BALANCE OF THE UNITED STATES[1]

I. THE BALANCE OF TRADE

A significant feature of our trade expansion during the last three years has been an enormous increase in the excess of exports of merchandise over imports—or a marked addition to our so-called "favorable balance of trade," as shown by Table I.

The excess in 1917 was probably greater than that indicated by the figures in the table, as quantities of merchandise, including war material, food, and clothing were sent out of the United States by the government for the use of our troops in Europe, and such material,

[1] By Abraham Berglund. Adapted from "Our Trade Balance and Our Foreign Loans," *Journal of Political Economy*, XXVI (1918), 732–43.

Ed. Note.—Mr. Berglund is professor of political economy at the University of Washington. He is now working with the Federal Trade Commission.

when passing out of the country on our own transports, goes without being recorded. The same is true of articles which the government

TABLE I

EXPORTS AND IMPORTS OF MERCHANDISE DURING THE YEARS 1912 TO 1917 INCLUSIVE

Calendar Year	Exports	Imports	Excess of Exports over Imports
1912	$2,399,217,993	$1,818,073,055	$ 581,144,938
1913	2,484,018,292	1,792,596,480	691,421,812
1914	2,113,624,050	1,789,276,001	324,348,049
1915	3,554,670,847	1,778,596,695	1,776,074,152
1916	5,482,641,101	2,391,635,335	3,091,005,766
1917	6,231,244,976	2,952,467,955	3,278,777,021

may be importing in the same manner, although the quantity of such imports is probably much less than the outgoing merchandise.

II. RETURN OF AMERICAN SECURITIES

The most conspicuous feature of our "financial" balance since the war began and the one of greatest significance for the future has been the return to the United States of securities in American industries formerly held by foreigners, coupled with a great increase in investments by Americans in foreign securities—largely, but not wholly, war loans. The extent to which investments by foreigners in American industries have been reduced since the outbreak of hostilities cannot be stated with any degree of accuracy. Compilations by President Loree, of the Delaware and Hudson Company, show that nearly 60 per cent of the foreign holdings of American railroad securities were returned to this country in the two years 1915 to 1917. These figures embrace the securities of 144 railroads—all the roads in the United States over one hundred miles in length.

On January 31, 1915, there were $2,704,402,364 (par value) of railroad securities held abroad, and on January 31, 1917, $1,518,590,878 had been returned to this country, leaving on the latter date $1,185,811,486 still held abroad.

Securities of industrial corporations and railroads in other lands have also been sold in this country to the extent of some hundreds of millions of dollars. Large investments have been made in Canadian and South American concerns, though we have no means of determining the extent of these investments.

III. LOANS BY THE UNITED STATES

Loans floated in the United States by foreign nations, both belligerents and neutrals, reveal another side of the same phase of our trade account with the world. Between August 1, 1914, and December 31, 1916, the loans raised in the United States by foreign countries were estimated to reach $2,325,900,000, of which $175,000,000 had been repaid. The net indebtedness on January 1, 1917, was therefore $2,150,900,000. The loans may be classified geographically as follows:

Europe	$1,893,400,000
Canada	270,500,000
Latin America	157,000,000
China	5,000,000
Total foreign loans	$2,325,900,000
Less amount paid, estimated	175,000,000
Net foreign indebtedness	$2,150,900,000

The loans of the belligerent countries which were floated in the United States up to the close of 1916 are divided as follows:

Great Britain	$ 908,400,000
France	695,000,000
Russia	160,000,000
Germany	45,000,000*
Canada	270,500,000
Total	$2,078,900,000†

*Estimated. † Nearly $1,900,000,000 of this constituted war loans.

Since the opening of the year in which the United States entered the war there have been issued $250,000,000 United Kingdom of Great Britain and Ireland one- and two-year 5½ per cent notes, of which $100,000,000 matured and was paid February 1, 1918; $100,000,000 Government of the French Republic 5½ per cent secured convertible notes; $80,000,000 Dominion of Canada notes; and approximately $315,000,000 additional, including British government ninety-day treasury bills. These amounts, minus the notes matured and paid, aggregate approximately $645,000,000. These sums do not of course include loans made by the United States government to her Allies since our entrance into the war.

A total appropriation of $7,000,000,000 has been made, $3,000,000,000 by the act of April 24, 1917, and $4,000,000,000 by the act of September 24, 1917. Under these authorizations credits have been established in favor of the governments of Great Britain, France, Italy, Russia, Belgium, and Serbia. These loans, up to January 17, 1918, are given in Table II. On the basis of the requests being made

TABLE II

Country	Loans and Credits Agreed Upon	Loans Made	Balances under Established Credits
Great Britain	$2,045,000,000	$1,985,000,000	$311,070,250
France	1,285,000,000	1,225,000,000	50,000,000
Italy	500,000,000	450,000,000	50,000,000
Russia	325,000,000	187,729,750	137,270,250
Belgium	77,400,000	75,400,000	2,000,000
Serbia	6,000,000	4,200,000	1,800,000
Totals	$4,238,400,000	$3,927,329,750	$311,070,250

on the Treasury, it is estimated that credits aggregating approximately $500,000,000 per month will be required to meet the urgent war needs of the foreign governments receiving advances from the United States. At this rate approximately the entire appropriation authorized by Congress will be accredited to our Allies by the close of the present fiscal year (June 30, 1918).

A significant feature of the loans floated in this country in the last three and a half years has been the fact that many states and municipalities which formerly went to London to sell their securities have recently been financed through the United States. About $150,000,000 of the Canadian loans went to provinces and municipalities, and many of the South American obligations were contracted for municipal improvements. The neutral nations of Europe have also sought accommodation in the American money market. Loans have been made to the city of Dublin, Ireland, the London Water Board, and the French cities of Paris, Bordeaux, Lyons, and Marseilles.

The establishment on a large scale of credits in this country in behalf of foreign nations and the flotation of foreign loans will probably continue during the period of the war. During the continuance of this "export of capital" the great surplus of exports over imports is likely to be a feature of our foreign trade. The interest on this investment which is already large and growing larger is on the credit side of our account with the world—making for the supply of foreign exchange

and thus encouraging imports. The United States, as a creditor country with great investments abroad, will be in receipt of an income which will tend to show itself in a relatively larger import trade than has been the case for three or four decades. In other words, our highly "favorable balance of trade" will tend to be changed into an "unfavorable balance."

IV. OUR SHIPPING IMPROVES

This transformation in our trade balance is hastened by another factor which is likely to be very potent if the war is of long duration. This factor is our mercantile marine engaged in foreign trade. As is well known only a small fraction of our foreign commerce in recent times has been carried in vessels flying the American flag. Ocean freight rates have thus been paid foreign vessel owners for services performed in the carriage of our exports and imports—these services figuring on the debit side of our account with the world and being paid for, in part at least, by a surplus of exports over imports.

Since the outbreak of war in Europe the proportion of our foreign commerce carried in American vessels has greatly increased. Between June, 1914, and June, 1916, the gross tonnage of American vessels engaged in foreign trade increased from 1,076,152 to 2,191,715—or more than doubled. The percentage of our exports carried by this tonnage increased during the same period from 8.3 to 13.0, and of our imports from 11.4 to 22.5. Since the United States entered the war a considerable part of our enrolled tonnage has been registered for the foreign service. The destruction of ocean vessels by submarine activity and the construction of new shipping have combined to increase our proportion of the total carrying capacity of the ocean merchant marine of the world. The bulk of the tonnage destroyed has been British, French, Norwegian, and Dutch. The new construction of vessels in the United States and in Japan has been out of proportion to that of any other country except Great Britain. In the case of Great Britain the new tonnage constructed has been more than offset by tremendous losses. The United States thus bids fair at the end of the war to have on her hands the ships necessary to carry on a large part of her foreign commerce.

V. A FORECAST

With the huge loans made to foreign governments and industries coupled with a decline in the holdings of foreigners in American

securities and the increasing importance of our mercantile marine in the commerce of the world, our "invisible exports" will figure to a greater extent in our commercial relations with other nations than heretofore. Like the exports of merchandise and of gold, they make for the supply of foreign exchange and will tend to stimulate the importation of merchandise. As a creditor country, the debt due us and the interest on that debt will be paid by a relatively greater increase of imports than of exports. Our present highly "favorable balance" of trade will tend to be changed into an "unfavorable balance." Our "invisible exports" will probably exceed our "invisible imports" with the balance made up by a corresponding excess of "visible imports" over "visible exports."

3. ALLIED CONTROL OF EXCHANGES AND GERMAN TRADE[1]

We are this month in the thick of important developments in national and international finance. The United States government has taken control of exchange, and its control is so complete that it now knows every transfer of money or credits of any kind from this country to any other, or from foreign countries to America, and all exchanges of credits belonging to Americans from one foreign country to another. Our government has not only made it a summary offense for an American business concern of any kind to take part in the transfer of merchandise, money, securities, bank credits, or rights of any kind to money or property anywhere in the world (except in business wholly within the United States) without its cognizance or direct permission, and it has built up a machinery of control which makes it well-nigh impossible for anybody to do so without coming under the penalties of the Enemy-Trading Act.

This control is bound to be of effect in interfering with Germany's ability to raise buying credits in the neutral countries contiguous to her through any kind of financial transactions in friendly quarters over the world where Germans have property, securities, or commercial accounts in banks. Germany's credit had been rising in the markets of these neutrals, and the rise was not all accounted for by publicly known financial arrangements with contiguous neutrals by which she obtained loans in compensation for permitting German coal, iron, and other products to go to the neutrals. There has evidently been good

[1] Adapted from *The Americas* (February, 1918), p. 14.

reason for suspecting that Germany had been drawing upon German credits elsewhere in the world, and some vagaries of international exchange within the past few months could be accounted for in this way. The rigid control of gold and silver exports by our government was suddenly assumed for the purpose (among other reasons and purposes) of preventing Germany's subtle realization on German property and credits in America, and now the government, no doubt in cooperation with other financially powerful Allies, has adopted a drastic measure that will greatly impede Germany's ability to realize on German property or credits even in neutral countries anywhere in the world, in order to transfer these into buying credits which she would use now in Scandinavia, Holland, or Switzerland, and perhaps be gathering at strategic points in the world for use of her industries at the moment of peace.

This is a development in the way of a financial offensive against Germany, supplementing the other economic offensives of the Allies.

4. PROBLEMS IN THE CONTROL OF FOREIGN EXCHANGE[1]

The development of the gold-embargo policy and the strengthening of public control of foreign exchange is bringing about in the trade of the United States the development of new conditions which are necessarily leading to the application of further methods of commercial regulation. Up to date under the gold embargo there have been granted licenses for the importation of about $60,000,000 gold, $100,000,000 silver, and $30,000,000 currency in round numbers, or a total of approximately $250,000,000. The value of the dollar in foreign markets has continued to decline because of the difficulty of obtaining means of remittance for the purpose of settling balances.

Peculiar conditions are recognized as surrounding the gold situation, due to the fact that as a result of the war and limitations upon trade it is not possible, as in times of peace, to offset foreign balances against one another. The situation is leading to the negotiation of special agreements with various foreign countries for the regulation of exchange relationships, many of these being based upon undertakings to export net balances of gold within a specified period after the close of the war. Congress has made provision by law for the sale of bonds abroad, payable in terms of foreign currency, and this

[1] Adapted from Washington Notes, *Journal of Political Economy*, XXVI (July, 1918), pp. 749–51.

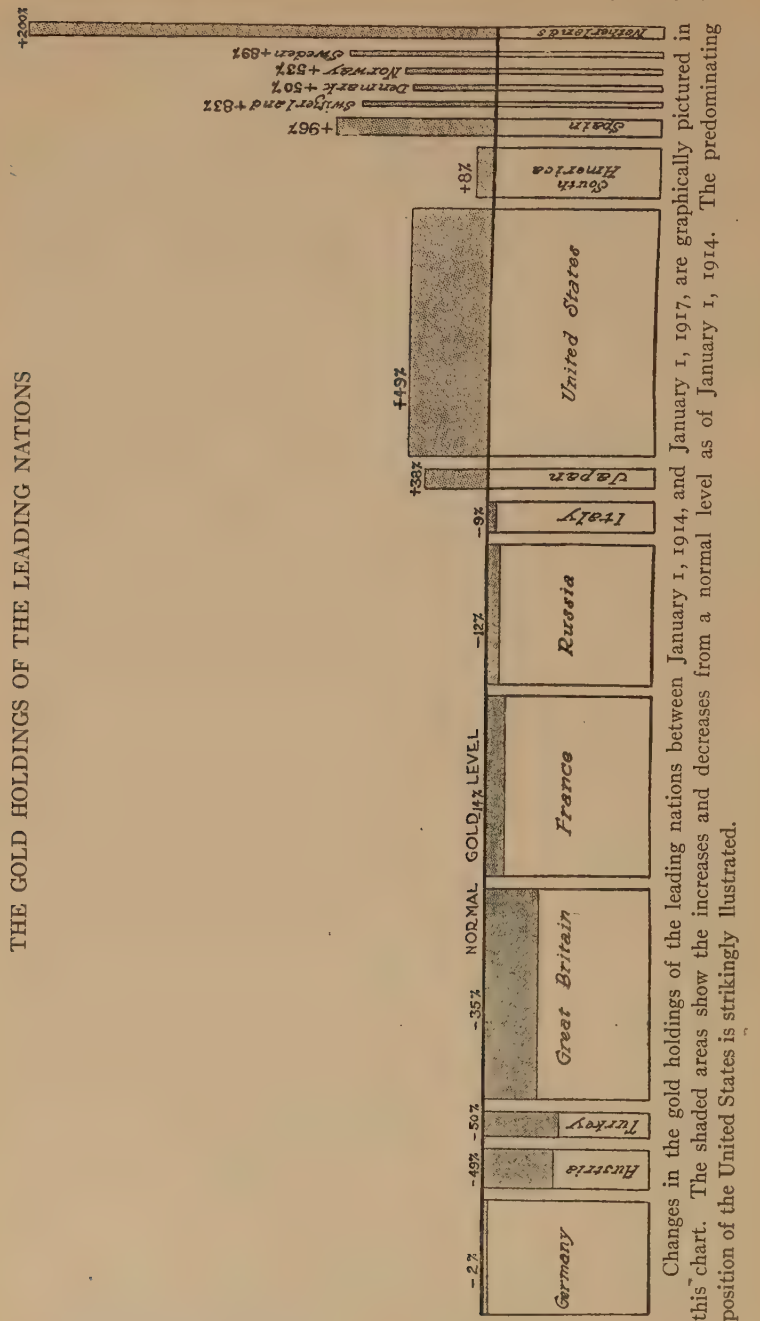
may render it possible in some instances to provide a means of liquidating balances due to those countries.

In some cases conditions have become so acute as apparently to require direct regulation of payments. In the case of Italy, for example, it has been deemed best to effect an adjustment whereby the practical supervision of each transaction is placed in the hands of a committee representing the Italian and American governments. Experience in connection with our foreign exchange relations is very similar to that already had by foreign countries which have attempted the same method of restricting payment. The interesting question in the whole matter is whether it will be possible to bring about a general control of financial relations with foreign countries unless trade relations with them are first subjected to such control. Thus far the regulation of trade relationships has been in the hands of the War Trade Board, but that Board has been governed very largely by military considerations and has given comparatively little attention to the commercial side of our foreign business.

Within the past sixty days the United States Shipping Board has come forward as a part of the system of regulation by applying methods for the control of tonnage. Under this plan those who wish to import commodities into the United States must obtain tonnage through assignment by the government. They are thus not only obliged to secure importation licenses but must also secure in practice action which will furnish them with the means of moving their goods. As yet it is uncertain how far this system will be worked out upon a strictly economic basis, that is, with a view to adjusting trade balances and thus relieving the disturbances to exchange and other financial relationships with foreign countries. As the war continues for a longer and longer period the necessity of a general limitation upon foreign business will grow more and more pressing, and the adoption of temporary measures designed to relieve difficulties in the exchange situation will become necessarily less and less effective. This is even now being made evident by the difficulties already referred to in connection with the tendency of the dollar to depreciate in buying power abroad as compared with currency units of the countries with which we are doing business.

XXV. Shifting the World's Gold Supply

1. GOLD HOLDINGS OF THE NATIONS, 1914–1917[1]



Changes in the gold holdings of the leading nations between January 1, 1914, and January 1, 1917, are graphically pictured in this chart. The shaded areas show the increases and decreases from a normal level as of January 1, 1914. The predominating position of the United States is strikingly illustrated.

[1] By John E. Rovensky. From a pamphlet distributed by the National Bank of Commerce, New York, in April, 1917.

Ed. Note.—Mr. Rovensky is vice-president of the National Bank of Commerce.

2. EFFECTS OF THE SHIFTING OF THE WORLD'S GOLD SUPPLY[1]

What have been the effects of these gold movements—first, upon the belligerents, and, second, upon the neutrals?

The governments of all belligerent countries have been alive to the fact that the greatest amount of service can be had from their gold by postponing parting with it as long as possible. Therefore they have permitted exchange on their countries to decline considerably before shipping gold.

A decline in the value of a currency always has the effect of raising the prices of imported commodities, as it requires more of the depreciated money to pay the foreigner for the same quantity of goods than it did before. A high rate of foreign exchange (i.e., a low rate of exchange on the subject country) is an infallible sign of a depreciation in the value of a currency.

Of course the main factors in raising price levels in the belligerent countries are the increased demand for merchandise and the reduced production of commodities, but this contributory defect of declining exchange is not inconsiderable. The extent of this upward movement of prices can be seen from the index number of *The London Economist*, which advanced from 2,565 in July, 1914, to 4,908 in December, 1916—an increase of almost 100 per cent.

The withdrawal of gold from circulation for export to the neutral countries created a dearth of circulating medium, which has been replaced by the additional issues of bank notes by the government banks. The movement did not stop there, however; the temptation to "make money" by the printing-press process has been too great in all countries, and we find everywhere a tendency to issue currency, not only sufficient to replace the gold, but far in excess of that amount.

The effects upon neutral or supply countries of the influx of gold have been, first, the direct impulse to finance and trade of the increase in circulating medium; second, the ultimate expansion of credit based upon the gold imported; third, the stimulus to trade from the aforementioned factors; fourth, higher price levels of commodities as a result of all three foregoing factors.

The secondary effect is the expansion of credit upon the basis of the gold thus imported. An excellent illustration of this is found in the last report of the Comptroller of the Currency.

[1] By John E. Rovensky (see p. 270). From a pamphlet (*ibid.*).

On June 30, 1914, just before the outbreak of the war, the total amount of cash held by all the banks of the United States (national, state, and private) was estimated at about $1,030,000,000. Of this amount about $613,000,000 was in the form of gold or its representative gold certificates. Upon this basis there rested a structure of credit amounting to $21,351,000,000. In other words, the gold basis of the country's deposit credits amount to 4.27 per cent. On June 30, 1916, the total amount of cash held by the same banks (including now the Federal Reserve banks) was $1,911,000,000, of which it is estimated that about $1,140,000,000 was in gold. In addition the Federal Reserve agents held quite an amount of gold as coverture for Federal Reserve notes issued, but this gold cannot be taken into consideration in this connection as it is not at present available as a basis of credit expansion.

Upon this gold basis of $1,140,000,000 there rested a credit structure of $28,250,000,000. The gold basis amounted to 4.02 per cent of the deposits. This is a clear illustration of how readily the gold taken into our system is assimilated and how promptly credit expands upon its basis.

The resultant effect upon our economic structure of such an expansion of credit and the stimulation of trade can well be imagined, and the next result—higher prices of commodities—is also apparent. Of course there are many other factors that tend to drive price levels upward, and primarily prices have risen because of the greatly increased demand upon us for materials by the belligerent countries.

That this situation contains many elements of danger is clearly apparent. The greatest dangers are:

First.—Overexpansion of credit and resultant stimulated trade.

Second.—General disarrangement of economic structure; high prices, abnormal wages; change in standards of living, etc.

Third.—The inevitable reversal of the golden tide.

XXVI. British Control of Trade and Industry

1. THE REGULATION OF TRADE IN GREAT BRITAIN[1]

When the war began no country was so ill prepared as England for controlling the trade and business ancillary to war, for protecting the public against monopolists. And yet no country has done so well

[1] By Robert Donald. Adapted from "Trade Control in War," an interview given to the *New York Times*, 1916.

Ed. Note.—Mr. Donald is the editor of the *London Daily Chronicle*.

the big things which are of vital importance to the armies and the people. The strong hand of the state has intervened, untrammelled for the time being by legislative checks, and has asserted its power of possession, control, direction, and regulation in every sphere of trade where public interest and the welfare of the Army had to be safeguarded.

When the war took the world—except the Teutonic portion of it—by surprise on the first of August, 1914, Europe commercially was at once plunged into anarchy. The first shock demoralised all the exchanges and knocked the bottom out of credit; cheques were not cashed, the sacred Bank of England "fiver" was rejected as a worthless scrap of paper. The possession of gold and goods was the only thing that counted. Goods were being cornered and prices were mounting unrestricted to prohibitive levels. England was in danger of a food famine. Promptly the government set up a Food Control Committee to regulate prices and prevent cornering. It was only a temporary measure to meet an unprecedented emergency. Things settled down in a few weeks, except in one or two directions.

The first discovery made, which no control could help, was that the country was short of sugar. England imported 39,385,190 cwts. of sugar per annum, and two-thirds of the supply came from Germany and Hungary. The outbreak of the war caught the country between two seasons, when supplies from Cuba and elsewhere were stopping and when the German imports had not begun. The stock in the country was very short. Mr. McKenna, who was then Home Secretary and chairman of the Food Supply Committee, promptly took action. He was given a free hand by the government. He called together all the sugar importers and refiners and selected two of them to buy for the British government. They bought sugar—both raw and refined—all over the world. England invaded the Java market for the first time. Supplies were obtained from Italy, America, the Argentine and other South American countries, from Spain, and from every country which had sugar to sell. The total value of these first purchases was over $86,400,000—the biggest deal in sugar in the history of the trade. It was not very long before the holders of sugar discovered that they were selling to the British government and began to raise the prices. Purchasing then stopped, but the official buyers swooped down on the markets later on, and since then there has been no difficulty about the supply of sugar in England. Contracts for long periods were made. The only difficulty has been,

not the shortage of sugar, but the shortage of freight to carry it to England.

The purchasing scheme was only preliminary. The government set up a commission to control the whole sugar trade. The British government is the only sugar importer. It sells at fixed prices to refiners, fixes the price for wholesale houses and for retailers. Every intermediary is allowed a fair profit, and the consumer is better protected than ever he was. When the war came, the tax on sugar was about 45 cents per hundred weight. It was raised for war purposes to $2.24. In normal times the retailers would have added two cents per pound to cover the increase, but the government had made so many favorable purchases that it only increased the price to the consumers by one cent per pound, and had left, not only the duty for the revenue, but also a profit on the transaction. The duty on sugar is now $3.36 per hundred weight, and yet it is cheaper in England than in any belligerent country and in most neutral countries. The public has been protected and the Treasury enriched. This year's budget includes, as the revenue for the British Exchequer on account of sugar, the sum of $33,600,000. The British government now supplies the French government with sugar at cost price.

The problem of beef supply had to be tackled at the same time as that of sugar. England depends largely at all times on imported frozen or chilled meat. When the war crisis came the public and the Army had to be protected from the beef trusts. Early in the war it was evident that the state had to act. Mr. Runciman, the president of the Board of Trade, the department which looks after commercial and mercantile marine interests, intervened. His first master-stroke was to seize all steamers with refrigerating space capable of carrying chilled meat. Chilled meat for England comes chiefly from the Argentine, Uruguay, and from Australia and New Zealand. In 1913 we imported 15,397,554 hundred weight of chilled and frozen meat. The government having gotten possession of the ships, the two parties were then on a level footing for bargaining. The meat corporations had the beef but could not sell it without ships. The government had the ships and wanted the meat, so that it did not take long to come to terms. The business was put in the hands of a committee of shipowners, and the whole transit problem was solved without delay. As a precaution against any shortage of chilled meat from the usual sources the government entered into contracts with a great American meat firm. As a further protection freezing works were acquired in South America for the period of the war. The enormous quantities

of meat imported from the United States for the armies are mainly in the form of bully-beef and other canned meat. The British government went into the beef business in order to supply the troops at home and overseas with chilled meat. It has done so at an average cost of 12 cents per pound. It also supplies all meat of this kind required by the French Army, the Italian Army, the Belgians, and the Serbians. The amount of meat required several months ago for the British and French armies was over 50,000 tons per month; for the Italian Army about 10,000 tons per month. These quantities have increased proportionately with the additions to the forces during the last six months. Having created a state monopoly in the importation and control of chilled meat, the government had to make provision for domestic supplies outside the Army. The Board of Trade arranged to sell to British firms the surplus meat at market prices. They obtained a small commission, lower than it hitherto received from traders. Sales to speculators were prohibited.

Wheat was quite as important as sugar and beef, although there was less risk of a world-corner. Wheat is purchased for government account on somewhat similar lines as beef. A small committee, at the head of whom is a civil servant and a corn expert, manage the whole business. One of the largest importing houses was commissioned to do all the purchasing, while the other houses held off, and it was four months before the corn trade, on the selling side, discovered the purchases were made for the state. Naturally the commission which the state pays on such transactions is nominal. The British government organisation buys and ships wheat, oats, fodder, etc., for Italy. The French government buys their civil *ravitaillement* wheat through the Hudson Bay Company. Large purchases have been made in Canada on behalf of the Italian government.

There are other examples of government purchase and control of food. Take fish, for instance. The fishing trade in the North Sea has been paralysed to a very large extent by the war, especially by the danger from submarines and mines. The government has maintained a service of fishing boats and has just completed a big deal with Norway, by acquiring the whole fish harvest of the year. Last year Germany bought the Norwegian fish supply. This year, before the German agents had time to turn round, the British government had bought the lot and deprived Germany of the sole outside source of supply.

The system of government control has been successful in other directions. There is the case of coal. Coal is wanted for the allied

fleets, for munition works, and for transportation by land and sea. Clearly the production and distribution of coal had to be made a public-utility service. The government passed a Price of Coal Limitation Act, which fixed a fair profit for the coalowners according to the prices in the year before the war. Having got the coalowners under control the act then regulated the prices which the wholesale dealers could charge, and also the retailers, throughout the United Kingdom. The result has been—no shortage of coal and no excessive prices. The regulation of coal has been a stupendous task, as more than half a million men engaged in coal mining have enlisted, and the first duty of the government was to see that not only the British Navy but the French and Italian navies should have ample supplies. Next came the mercantile marine, transport, munition works, etc. The British government supplies not only its own needs but also those of France and Italy. After much trouble the problem of freight has been regulated, as far as England and her Allies can control their own mercantile marine, but much of the trade is done by neutrals. The general export of coal was prohibited, except to the allied countries and British possessions. A network of coal- and coke-supply committees has been set up throughout the country under the supervision of a central authority working under the Board of Trade. Beyond supplying the war and governmental needs, including the railroads of the French and Italian governments, the British Board of Trade regulates the freights for the supply of coal for commercial and business purposes in France and Italy, so far as it has the tonnage available. Mr. Runciman declined to make this arrangement until France introduced the same system of regulating prices, otherwise the whole of the benefit would have got into the pockets of the French coal merchants.

These are only some of the great business undertakings which the war has forced upon the British government. Except in the case of sugar, all have been carried out by the Board of Trade.

2. THE DEVELOPMENT OF THE BRITISH MINISTRY OF MUNITIONS[1]

On the 14th of May, 1915, the *Times* military correspondent on the Western Front wrote that the absence of an unlimited supply of

[1] By Jules Destrée. Adapted from *Britain in Arms*, pp. 180–98. Copyright by John Lane Co., New York, 1917.

Ed. Note.—Jules Destrée is a noted French traveler and journalist, an interpreter of the entente nations to each other. The preface to *Britain in Arms* is contributed by Georges Clemenceau.

high explosives had proved a fatal obstacle to success. In saying this he gave free and open expression to criticisms that had been rife in the lobby of the House of Commons and in private circles for a long time past. The failure of the British Army to reap the full fruits of its splendid achievements at Neuve Chapelle, and the ebb and flow in the defence of Hill 60 on the 17th of April were cases in point. An energetic campaign was organised in the newspapers after the publication of the *Times* letter. Questions were put in the Commons. Popular feeling was deeply stirred.

This feeling was unquestionably justified. The War Office had displayed a lack of foresight in its arrangements for the production of munitions, a shortcoming which it shared, however, with the other partners in the Alliance; of that the Russian reverses afforded decisive proof.

The daily output of munitions did not equal the necessary consumption. How immense this consumption is it would be difficult to realise, did we not know that the number of shells consumed at Neuve Chapelle alone was greater than the total employed in the whole South African campaign.

Moreover the English factories had manufactured a great quantity of shrapnel, but only a comparatively restricted supply of high explosives. This was diametrically opposed to the requirements of the situation. In fact, the nature of the terrain and the strength of the enemy's defensive works were such that, before an infantry attack could be launched, even under protection of shrapnel fire, it was necessary that the hostile positions should be subjected to such a deluge of high explosives as to render the most thoroughly organised defences untenable.

These defects having been made manifest by bitter experience, measures were taken to remedy them.

The 25th of May, 1915, witnessed the formation of the Coalition government in England. Mr. Lloyd George became head of a newly created department—the Ministry of Munitions. The new Minister lost no time in setting to work. He remedied the most urgent defects and, a month later, laid on the table of the House the Munitions Bill that was to solve the great problem once for all.

The problem may be stated as follows:

Experience had shown that of the two opposing forces the advantage would rest with the one that could outdo the other in the expenditure of munitions. From that time onwards the question ceased

to be a purely military one: it became a labour question. It was in the workshops, the factories, the arsenals, that victory was to be wrought out.

This had been perfectly well understood by the Germans, and in this as in so many other respects they had the advantage over the Allies of preparation and foresight. These preparations were of two kinds. They consisted, in the first place, in the accumulation of reserves of munitions and of the raw material necessary for their manufacture, and, secondly, in the measures ensuring the immediate and effective mobilisation of the national industries for the sole and exclusive purpose of carrying on the war. The Central Empires were able to turn out 250,000 shells a day, or nearly 8,000,000 a month. The British rate of production was 2,500 high explosive shells and 15,000 shrapnel shells a day. Thus the problem before the Allies was first of all to equal and then to surpass the formidable productive capabilities of their adversaries. The sooner they did so, the sooner victory would be theirs.

England's reserves in the matter of labour and machinery were immense. But they were all unsystematised. The problem was to organise these resources, and to organise them without delay.

Mr. Lloyd George's first step was to select his staff. A large number of business men, technical engineers, and others freely placed their services at his disposal, most of them without demanding any remuneration from the state. Each one of them was put in charge of a particular branch, e.g., metals, explosives, machinery, labour, chemical research, and so on.

But Mr. Lloyd George's principal aim being to obtain quick returns, he regarded it as an urgent necessity to decentralise the work as much as possible. The United Kingdom was split up into a certain number of districts; special committees were formed for the purpose of organising the work in each district. They consisted of local business men who were familiar with the resources and the labour conditions of the place; of engineers who, in order to fit them for their duties, had undergone a brief period of service in the government arsenals or in one of the following works: Elswick, Vickers-Maxim, or Beardmore; and of a technical engineer and a secretary in touch with the Ministry of Munitions.

One of the great difficulties was the matter of raw material. Some England possessed in abundance, some could only be obtained with difficulty. The department had also to see to it that no attempt was

made by unscrupulous suppliers to make a corner in their goods. The doings of the metal markets were carefully looked into, with immediately beneficial results.

Having provided the raw material, the next thing was to get to work on it. Where was the plant to come from?

A vast registration scheme was set on foot, and in a short time the government had an accurate idea of the machinery at its disposal. As soon as the process of classification was completed it was of course evident that what was chiefly lacking were certain machines required in the manufacture of large shells. The government thereupon took all the big machine works under its direct control for the duration of the war. Henceforth these works were government works, and on the 28th of July, 1915, Mr. Lloyd George remarked with satisfaction that there had not been a word of protest on the part of any machine-tool manufacturers, although the change involved a considerable diminution in their profits. Owing to this measure, supplemented by the creation of a committee of machine-tool manufacturers of the United Kingdom, the output of material required for the manufacture of munitions was greatly increased, and will increase still further as time goes on.

The government was thus able to reorganise the production works themselves. These were of two kinds. First, there were the munition works properly so called, where it was necessary to extend the plant or increase the rate of production. Then there were factories which had to be altered so as to adapt them to the new kind of work. Finally, the government decided to create sixteen large works—a number subsequently increased to twenty-six—the equipment of which is being carried out with the utmost dispatch.

The next thing was to organise the labour and recruit fresh hands. There was a choice of two methods, the compulsory and the voluntary. After going into the matter with the Trades Union leaders it was the latter method that was decided upon. It was more in accordance with English traditions and sentiment.[1] A vast recruiting campaign was started, the headquarters being the town hall, in one hundred and eighty different centres. It lasted a week and was an immense success. Mr. Lloyd George stated, on the 23d of July, 1915, that the government had got together 100,000 workmen, most of whom were experts in machinery and shipbuilding. True it was not possible to employ them all, some already doing government work, others being

[1] Cf. Section XIX.

indispensable to the civil life of the country. But when all deductions were made it was found that the number of men was amply sufficient for present needs. To them we must add the skilled workmen who had joined the Army and who, as far as possible, were brought home to serve their country in an industrial capacity.

All the workmen were assigned either to the works already in existence—which in many cases were short of hands and unable for this reason to fulfil their contracts—or else they were allotted to the new factories.

But in view of influence wielded by the labour unions, various provisions were inserted in the Munitions Act. They related to the settlement of labour disputes and to the prohibition of strikes and lock-outs the grounds for which had not been submitted to the Board of Trade.

To obviate such disputes, which were generally called forth by the excessive profits accruing to the employers and the demands of the wage-earners, the system of "controlled establishments" was instituted. Every establishment engaged on munition work was placed, so far as the regulation of profits and salaries was concerned, under direct government control. Any modification in the rate of wages had to be submitted to the Ministry of Munitions, which had power to refer the question to an arbitration board specially set up by the act.

To complete this rapid survey it must be added that a department was created by the Ministry of Munitions, under the control of an under-secretary, whose special business it was to examine war inventions.

On the 20th of December, 1915, Mr. Lloyd George, in a speech delivered in the House of Commons, summarised the results of the first six months of his tenure of office. We will take a few points.

Orders placed before the formation of the department were delivered with an increase of 10 per cent on previous deliveries. The number of new orders placed increased by 80 per cent.

The state regulation of the metal market resulted in a saving of from 15 to 20 million pounds sterling.

The present output of shells for a single week is three times as great as the entire output for May, 1915, which means that the rate of production is twelve times as great.

The enormous quantity of shells consumed during the offensive of September, 1915, was made good in a month. The time will soon come when a week will suffice.

The output of machine guns is five times as great; that of hand grenades is increased forty fold.

The production of heavy artillery has been accelerated, and the heaviest guns of the early days of the war are now among the lightest.

An explosive factory in the south of England, which on October 15, 1915, started to fill bombs at the rate of 500 a week with a staff of 60, was in March, 1916, turning out 15,000 a week with a staff of 250.

An entirely new factory which started work at the end of October, 1915, with one filling shed and six girl fillers and an output of 270 a week, was in March, 1916, employing 175 girls and handling 15,000 bombs a week.

The Ministry of Munitions has built, or is building, housing accommodation for 60,000 workers, and canteens and mess-rooms in munition works now give accommodation for 500,000 workers a day.

3. ENGLAND'S MACHINERY FOR INDUSTRIAL CONTROL[1]

It has been said that there are 250,000 persons employed in England in connection with censorship and with various phases of domestic and foreign business regulation for purposes of war. This figure may include also the civil employees in the Munitions and War departments, but it shows how the business side of the war has to be organized. An idea of the extent and intricacy of British control of business activities may be obtained from the following list of control boards, recently made public by the British government in a directory printed for the convenience of persons having business with them.

There is no indication, in the official publication, of how the activities of all these boards and committees are co-ordinated and made to do team-work in accordance with a central policy.

Acetylene Committee
Admiralty Coasting Trade Committee
Admiralty Board of Inventions and Research
Aërial Transport Committee
Aëronautics Advisory Committee
Agricultural Machinery and Implements Branch of the Ministry of Munitions
Agriculture and Fisheries Board and Royal Agricultural Society (Joint Committee)
Alcohol Supplies for War Purposes Advisory Committee
Army Contracts Advisory Committee
Army Supplies Commercial Department
Black List Committee

[1] Adapted from *The Americas*. Copyright by National City Bank, New York, 1918.

Bleaching Powder Committee
Blockade Ministry
Blockade Ministry Committee
Board of Customs and Excise
Breathing Apparatus in Coal Mines
Building Labor Committee
Building Trades, Central Advisory Committee
Business Names Registry
Butter Supplies Advisory Committee
Canal Control Committee
Capital Issues Committee
Cargoes (Delay in Unloading) Committee
Cargoes (Diverted) Committee
Cargoes—Insurance
Cattle, British, Committee on Utilization of
Chemical Trade Committee
Coal Exports Committee
Coal Mines (Controller of) Advisory Board
Coal Mines Department
Cocaine or Opium (Permits) Committee
Commercial and Industrial Policy Committee
Commission Internationale de Ravitaillement
Contraband Committee
Contracts Made Prior to the War
Controlled Establishments—Board of Referees on Profits
Copper Committee
Cotton Control Board
Cotton Exports Committee
Cotton Growing in the British Empire, Committee on
Defence of the Realm (Licensed Trade Claims) Commission
Defence of the Realm (Losses) Commission
Delay in Unloading Cargoes Committee
Diamond Export Committee
Distributing Trades (Scotland) Committee
Diverted Cargoes Committee
Dyes, Commissioner for
Electrical Trades Committee
Electric Power Supply Committee
Empire Cotton Growing Committee
Enemy Debts Committee
Enemy Exports Committee
Enemy Supplies Restriction Department
Engineering and Shipbuilding Establishments Production Committee
Excess Profits Duty Committee
Exports and Imports Licensing Committee
Exports Committee
Fair Prices Committee
Fertilizers Committee
Finance Department (Blockade)
Fish (Coarse), Irish Committee
Fish (Cured) Committee
Fish Food and Motor Loan Committee
Fish Food Committee
Fish (Tinned) Imports Committee
Fisheries Sea (Scottish) Committee
Fresh Water Fish Committee
Flour Mills Control Committee
Food Ministry
Food Production Advisory Committee
Food Production Department
Food Production in Ireland Advisory Committee
Food Production in Ireland Departmental Committee
Food Production in Scotland Committee
Forage Committee (Farm Produce)
Foreign Claims Office
Foreign Trade Debts Committee
Foreign Trade Department
Fruits (Import Licenses) Committee
Fuel Research Board
Glass and Optical Instruments Committee
Grain and Potato Crops (1917) Committee
Grain Supplies Committee
High Explosives Committee
Hop Control Commitee
Horse Breeding Committee (No. 2)
Horses (Utilization and Feeding of) Committee
Housing (Building Construction) Committee
Imperial Mineral Resources Bureau (Committee on Proposed Establishment)

Imperial Preference, Ministerial Committee on
Import Restrictions Department
Indian Wheat Committee
Industrial (War Inquiries) Branch
Information Department of Foreign Office
Insurance Intelligence Department
Insurance of British Ships' Cargoes
Invention and Research, Admiralty Board of
Iron and Steel Industries Committee
Labor Advisory Committee (National Service Department)
Labor Ministry
Labor, Substitutionary (Scotland) Committee
Leather Supplies Central Advisory Committee
Licensing Committee (Exports and Imports)
Liquor Trade (Financial Aspects of Control and Purchase)
Liquor Traffic, Central Control Board
Lubricating Oil Advisory Committee
Machine Tool Committee
Machinery and Implements, Agricultural
Machinery, Central Clearing House for
Meat
Mercantile Marine (Seamen), Conditions of Employment, Interdepartmental Committee
Mercantile Marine (Seamen's Effects) Grants for Losses through Hostile Operations at Sea Committee
Mercantile Marine Standard Uniform Committee
Metal (Non-ferrous) Trades Committee
Metals and Materials Economy Committee
Milk Distribution Committee
Mine Rescue Research Committee
Mineral Resources Advisory Committee
Mineral Resources Bureau Committee
Munitions Boards of Management Executive Committee
Munitions (Inter-allied) Bureau
Munitions Finance Committee
Munitions Financial Advisory Committee
Munitions Hours of Labor Committee
Munitions Inventions Panel
Munitions Labor Priority Committee
Munitions Ordnance Committee
Munitions Parliamentary Executive Committee
Munitions Priority Advisory Committee
Munitions Workers' Health Committee
Munitions Works Board
National Service Central Advisory Committee
National Service Department
National Service (Ireland) Department
Oats Control Committee
Oils and Fats Branch of the Ministry of Munitions
Oranges, Advisory Committee on Imports
Overseas and Government Loans Committee
Overseas Price Disposal Committee
Paper Supplies Royal Commission
Passenger Traffic between United Kingdom and Holland, etc., Committee
Peat Deposits in Ireland, Committee on
Petrol Control Department
Petroleum Executive
Petroleum Pool Board
Petroleum Regulation of Supplies Committee
Pig-Breeding Industry (Ireland) Departmental Committee
Port and Transit Executive Committee
Potash Production
Poultry Advisory Committee
Preference, Imperial
Pre-War Contracts Committee
Prize Cargoes Release Committee
Prize Claims Committee
Prize (Overseas) Disposal Committee
Production, Committee on

Purchases Department
Railway Executive Committee
Railway Executive Committee (Ireland)
Rationing Consultative Committee
Ravitaillement, Commission Internationale de
Raw Materials Finance Branch of the War Office
Reconstruction Ministry
Registry of Business Names
Registry of Business Names Committee (Ireland)
Reserved Occupations Committee
Road Stone Control Committee
Rubber and Tin Exports Committee
Scientific and Industrial Research Department
Scottish Shale Industries Committee
Seamen, Conditions of Employment
Shipbuilding Advisory Committee
Shipbuilding Construction Committee, Ministry of Shipping
Ship Licensing Committee, Ministry of Shipping
Ship (Neutral) Detention Committee
Shipping and Shipbuilding Industries Committee
Shipping (International) Committee
Shipping Control Committee
Shipping Ministry
Spirits and Wine, Delivery of from Bond, Advisory Committee to
Standard Uniform for Mercantile Marine Committee
Sugar Supplies Royal Commission
Sulphate of Ammonia Distribution Committee
Sulphur, Sicilian, Committee on Supplies of
Sulphuric Acid and Fertilizer Trades Committee
Tea Advisory Committee
Tea Control Committee
Timber Supplies Department
Tin and Rubber Exports Committee
Tobacco and Matches Control Board
Tobacco (Import Licenses) Committee
Tonnage Priority Committee
Trade after the War, Committee on Commercial and Industrial Policy
Trade, Development of, between British Empire and Belgium
Trading with the Enemy Advisory Committee
Treaties with Enemy Countries Revision Committee
Trench Warfare Chemical Advisory Committee
Trench Warfare Commercial Advisory Committee
Trench Warfare Mines Committee
Trench Warfare Research Advisory Panel
Trench Warfare Supply Department, Chemical Section
Utilization and Feeding of Horses Committee
War Output, National Advisory Committee
War Risks Insurance Office
War Trade Advisory Committee
War Trade Department
War Trade Intelligence Department
War Trade Statistical Department
Wheat Executive
Wheat Supplies—Royal Commission
Woods and Stones (Import Licenses) Committee
Wool Purchase Central Advisory Committee
Woolen and Worsted Industries Board of Control

XXVII. United States Regulations

1. HOW THE NEUTRALS HELP GERMANY[1]

Germany has been making a maximum use of her small neutral neighbors in a highly profitable mutual arrangement to counter what would otherwise be the disastrous effects of the loss of control of the seas. That the aid thus brought to Germany was very considerable is proved by the figures adduced below;[2] and that the case of Switzerland is only typical of all the neutral neighbors of Germany is a matter of common knowledge.

Exports by the neutrals into Germany occur in two forms: First, there is direct re-exportation of materials imported from abroad. This has formed a considerable volume of the trade of Germany and the neutrals and has by no means yet ceased. The second form is the export of domestic products and the filling of the deficit by importation from abroad, mainly from the United States. The neutrals are profuse in their promises that no material imported from America will be re-exported into Germany.

To direct and indirect re-exportation must be added, finally, smuggling, which has always been a factor in the evasion of blockades. In Switzerland a member of the Commerce Department of the government was recently convicted of this offense and is serving a prison sentence.

That this aid was precious to the Central Powers and enabled them to stave off starvation and consequent submission can be corroborated in various ways. First, in spite of the enormous volume of imports from the neutrals Germany was on the verge of starvation during the last winter, the economic crisis reaching its critical stage coincidentally with the political crisis in the Reichstag at the beginning of July. The most potent cause of this political upheaval was the economic destitution, which cast its melancholy shadow over the whole nation and increased the desperation of people and Reichstag till it exploded in a violent outburst of wrath against the government.

[1] By James Louis Moore. Adapted from the *New York Times*, August 19, 1917.

ED. NOTE.—Mr. Moore is the Bayard Cutting Fellow of Harvard University for European Research in Modern History and International Law. The reading clearly shows the necessity of commercial agreements with neutral countries, such as that concluded with Norway on May 10, 1918, which covers about 50 commodities (*War Trade Board Regulations*, 103).

[2] ED. NOTE.—Extensive figures were given by the writer to prove the case for Switzerland.

Secondly, the general impression of press and people in Germany and Switzerland is that the most sensational part of the speech of Erzberger, which brought the crisis into being, consisted of an exposé proving the futility of the submarine policy and impugning the judgment of the officials responsible for its inauguration, inasmuch as the entrance of the United States into the list of Germany's enemies, which resulted therefrom, was likely to result in a curtailment of the imports obtained through the neutrals, and without a continuance of these imports Germany could not hold out long.

2. GENERAL POLICIES OF THE WAR TRADE BOARD[1]

The activities of the Board are roughly divisible into three spheres—those relating to the control of exports, those relating to the control of imports, and those relating to enemy trade.

The Board has sought first to conserve for ourselves and for those associated with us in the war such commodities as are required to maintain adequately the economic life of the several nations and to carry out their war programs. Other objects sought have been to prevent our commodities reaching the enemy directly or indirectly, as by releasing like goods for the enemy, and to prevent commercial transactions between persons within the United States and an enemy or an ally of the enemy.

In undertaking to supply the food and other vital wants of neutral peoples, under carefully considered agreements, the Board has desired "to prevent acute suffering in those countries and to prevent them from falling under the economic power of the enemy."

These trade agreements the Board has regarded as being particularly important in the case of those European neutrals which are in trade relations with the enemy. Against these European neutrals, the report goes on to say, "temporary embargoes have been enforced pending the securing of information indispensable to permit the Board to issue licenses."

An agreement has been concluded with Switzerland, assuring to the Swiss the periodic receipt of a stipulated grain ration and of other articles required to maintain the economic existence of the people of Switzerland. "The Swiss government, on the other hand, gives satisfactory assurances against exportation to our enemies of imported commodities and agrees to limit, in certain other respects, her trading with the enemy."

[1] From *War Trade Board Journal* (March, 1918), pp. 15–16.

A still more definite achievement is discoverable in the Board's references to the Northern European neutrals, where temporary embargoes are in force pending the conclusion of comprehensive agreements. The report continues:

> Their exports of foodstuffs to the Central Powers have declined from last year's corresponding exports in amounts estimated at from 65 to 85 per cent, depending on the neutral, and there has been a decrease in the export of many other important commodities.
>
> In November, 1917, we became party to Great Britain's tentative agreement with Norway, as a result of which action on our part 1,400,000 tons dead-weight of Norwegian shipping were chartered into the service of the United States and Great Britain for the period of the war. Shortly following, temporary agreements were concluded with Holland and with Sweden. That with Holland gives us the use, for periods up to 90 days, of 450,000 tons dead-weight of her shipping which had heretofore, for a long period, lain idle. The agreement with Sweden gives us the use for three months of tonnage estimated at 250,000 tons dead-weight which had not theretofore been employed in services useful to us.
>
> Specific accomplishments of this character are, however, far from constituting a full measure of the results achieved by the War Trade Board. The elimination of enemy advantage from our trade and, to a considerable extent, from that of the world, the securing and conserving of commodities essential to ourselves and those associated with us in the war, the bringing of shipping generally into the services most useful to us—these results can not be accurately stated or appraised at the present time, nor have they been accomplished by any single act or agreement.

The report explains the use of bunker-coal licenses, as being intended to assure the utilization of America's restricted supply of fuel primarily by ships performing services useful to the United States and its associates in the war.

Abolition of calls at Halifax for ships sailing between United States and European neutral ports, which is foreshadowed in a paragraph dealing with the endeavors of the Board to reduce the necessary control machinery over sailings, has since been accomplished; "letters of assurance," heretofore issued by the British Embassy, are also no longer required.

The extent of the business under the control of the Board may be gathered from the fact that the Bureau of Exports has handled approximately 425,000 applications for licenses to export and was, at the date of the report, passing upon between four and five thousand applications per day.

The Bureau of Imports, of more recent formation, has received, to January 1, 5,279 applications for licenses to import, upon which 4,719 licenses, covering commodities of an aggregate value of $237,810,949, had actually been issued.

In order to guide merchants in their transactions with foreigners, there was published in October an "Enemy Trading List" containing the names of individuals and associations in neutral countries who were enemies or allies of enemies. This list is not a fixed and unchanged classification, but is subject to constant revision, and the Board has been able to remove from the original list many firms who have cleared themselves of the taint of enemy character.

3. EXPORTS IN TIME OF WAR[1]

Whereas Congress has enacted, and the President has, on the 15th day of June, 1917, approved a law which contains the following provisions:

"Whenever, during the present war, the President shall find that the public safety shall so require, and shall make proclamation thereof, it shall be unlawful to export from, or ship from, or take out of, the United States to any country named in such proclamation any article or articles mentioned in such proclamation, except at such time or times, and under such regulations and orders, and subject to such limitations and exceptions as the President shall prescribe, until otherwise ordered by the President or by Congress: *Provided, however,* That no preference shall be given to the ports of one State over those of another.

"And whereas the President has heretofore by proclamations dated July 9, 1917, August 27, 1917, September 7, 1917, and November 28, 1917, declared certain exports in time of war unlawful, and the President now finds that the public safety requires that such proclamations be amended and supplemented in respect to the articles and countries hereinafter mentioned:

"Now, therefore, I, Woodrow Wilson, President of the United States of America, do hereby proclaim to all whom it may concern, that the public safety requires that the following articles, namely, all kinds of arms, guns, ammunition, and explosives, machines for their manufacture or repair, component parts thereof, materials or ingredi-

[1] By Woodrow Wilson. Adapted from a proclamation of the President, February 16, 1918, extending control of exports to every commodity of commerce, in the *War Trade Board Journal* (March, 1918), pp. 4–5.

ents used in their manufacture, and all articles necessary or convenient for their use; all contrivances for, or means of, transportation on land or in the water or air, machines used in their manufacture or repair, component parts thereof, materials or ingredients used in their manufacture, and all instruments, articles, and animals necessary or convenient for their use; all means of communication, tools, implements, instruments, equipment, maps, pictures, papers, and other articles, machines, and documents necessary or convenient for carrying on hostile operations; all kinds of fuel, food, foodstuffs, feed, forage, and clothing, and all articles and materials used in their manufacture; all chemicals, drugs, dyestuffs and tanning materials; cotton, wool, silk, flax, hemp, jute, sisal, and other fibers and manufactures thereof; all earths, clay, glass, sand, stone, and their products; animals of every kind, their products and derivatives; hides, skins, and manufactures thereof; all non-edible animal and vegetable products; all machinery, tools, dies, plates, and apparatus and materials necessary or convenient for their manufacture; medical, surgical, laboratory, and sanitary supplies and equipment; all metals, minerals, mineral oils, ores, and all derivatives and manufactures thereof; paper pulp, books, and all printed matter and materials necessary or convenient for their manufacture; rubber, gums, rosins, tars, and waxes, their products, derivatives, and substitutes, and all articles containing them; wood and wood manufactures; coffee, cocoa, tea, and spices; wines, spirits, mineral waters, and beverages; and all other articles of any kind whatsoever shall not, on and after the sixteenth day of February, in the year one thousand nine hundred and eighteen, be exported from, or shipped from, or taken out of, the United States or its territorial possessions to Abyssinia, Afghanistan, Albania, Argentina, Austria-Hungary, Belgium, her colonies, possessions, and protectorates, Bolivia, Brazil, Bulgaria, China, Chile, Colombia, Costa Rica, Cuba, Denmark, her colonies, possessions, and protectorates, Dominican Republic, Ecuador, Egypt, France, her colonies, possessions, and protectorates, Germany, her colonies, possessions, and protectorates, Great Britain, her colonies, possessions, and protectorates, Greece, Guatemala, Haiti, Honduras, Italy, her colonies, possessions, and protectorates, Japan, Liechtenstein, Liberia, Luxembourg, Mexico, Monaco, Montenegro, Morocco, Nepal, the Netherlands, her colonies, possessions, and protectorates, Nicaragua, Norway, Oman, Panama, Paraguay, Persia, Peru, Portugal, her colonies, possessions, and protectorates, Roumania, Russia,

Salvador, San Marino, Serbia, Siam, Spain, her colonies, possessions, and protectorates, Sweden, Switzerland, Turkey, Uruguay, or Venezuela, except under license granted in accordance with regulations or orders and subject to such limitations and exceptions as have heretofore been, or shall hereafter be, prescribed in pursuance of the powers conferred by said act of June 15, 1917."

4. PURPOSE OF RESTRICTING IMPORTS[1]

The benefits to be derived from the license system are numerous, one of the most obvious being that the present control over the distribution and use of raw materials, which are now imported under license, will be extended to all materials, so that if at any time a shortage exists or appears imminent in any imported material the supply thereof may be directed to the uses most vital to our martial requirements.

But the most effective manner in which this weapon of import control may be used against the enemy is the prevention of trading with firms of pro-enemy character. No commerce, of course, exists between the United States and the countries with which we are at war. Unfortunately, however, largely due to the foresightedness of our enemy in long years of preparation, individuals and firms are established throughout the world whose controlling motive is the advancement of German interests. Still more unfortunate is the fact that such agencies have existed in our own land. To stamp out all activities among such agencies and to safeguard our well-intentioned citizens from dealing with them, we must proceed with the utmost promptness and vigor. The forms of activity of these concerns and the subtle and intricate methods pursued by them are innumerable, but are invariably directed, either by furnishing information, smuggling supplies through the blockade, providing credits, or hoarding for post-war purposes, to giving aid and comfort to the enemy.

Before the advent of the United States into the war Great Britain and her Allies found it necessary to surround the importation into this country of commodities controlled by them with various safeguards, in the form of guaranties and agreements procured from importers. Now that we have entered the war and established our export and import control, our Allies have very willingly relinquished to us the duty of seeing that the imports coming forward to us are used for our own legitimate purposes, and are not re-exported to pro-German firms

[1] Adapted from *War Trade Board Journal* (March, 1918), pp. 11–12.

in neutral countries to trickle through, either physically or in the form of credits, to Germany, or accumulated to foster Germany's commerce after the war.

To accomplish these results the War Trade Board, through its Bureau of Imports, has adopted certain regulations in connection with the importation of many of these raw materials, to which it is the duty of every patriotic American citizen to give complete and whole-hearted support.

Organizations have been voluntarily created in many of the trades, such as rubber, wool, jute, tin, etc., to act as consignees when required and to perform other duties in connection with importations, under and by direction of the War Trade Board.

Every effort will be made to administer these regulations with the slightest possible detriment to legitimate business interests, but when it is considered that the transmittal of a few pounds of rubber or copper to Germany may cost the lives of scores of our men at the front, and that each day's supply of wool, or food, or money to the enemy means another day's war, with its accompanying toll of lives, the very thought of hesitancy or weakness is inconceivable. The policy will be "safety first" for our soldiers, regardless of every other consideration. Persons and firms in this country, as well as abroad, who before our entrance into the war had little sympathy with the war-time commercial safeguards of the Allies must be taught that these are now matters of the first importance to this country, and violators of present restrictions need expect no favors, regardless of how important such individuals or firms may be in the business world. The time has come when all must realize that the war is not limited to combating the enemy on the battle fields of France, but must be carried into our everyday transactions of life, and that our business practices must be remolded, where necessary, to meet existing conditions.

It is unnecessary to mention other desirable results which may be obtained by this import control, such as the gathering of trade information or the conservation of tonnage by elimination of non-essentials.

No anxiety need be felt by importers that there will be any serious restrictions of the importation of necessary articles if the transaction does not involve dealing with an enemy or ally of an enemy, or otherwise giving him aid or comfort. If the importer endeavors diligently and in a spirit of cooperation to comply with the requirements of

the War Trade Board, no loss and but slight inconvenience need be anticipated.

Since November 28 last, import licenses have been required for many of the basic raw materials, and importers are already familiar with the very simple method of procuring them. The added inconvenience of applying for licenses for all importations will be negligible in comparison with the advantages secured. The question of what does or does not require a license, with its accompanying uncertainty and delay, will be eliminated.

5. PROBLEMS OF THE ORDNANCE DEPARTMENT[1]

In order to make the statement comprehensible as to the activities and responsibilities of the Ordnance Department, let us consider it from the standpoint of the obligation put upon that department in respect to a single unit of the Army. The smallest unit bringing into play all classes of arms and all forms of munitions and equipment is an army division. To simplify the description at the expense of exactness, an army division consists of two brigades, each brigade consisting of two infantry regiments, one machine-gun battalion, two regiments of 75-mm. field artillery, one regiment of field howitzers of 155 mm., and one battery of trench mortars. These make up the primary front-line forces and are supplemented by a regiment of engineers, the signal corps, and the aircraft service. Back of the lines we have the transport trains for munitions and field supplies, the hospital units, heavy artillery, tanks, and special reserve field artillery. For the equipment of a division the Ordnance Department carries responsibility for furnishing to the division and maintaining always on hand, in perfect order and for instant use, in round figures, 18,000 rifles, 12,000 pistols, 224 heavy guns, 768 automatic rifles, thirty-six anti-aircraft machine guns, fifty 75-mm. field artillery, twenty-four 155-mm. howitzers, twelve 6-in. trench mortars, twenty-four 3-in. trench mortars, twelve 1-lb. guns, together with all necessary and reserve ammunition and also trench-warfare munitions consisting of bombs, hand grenades, rockets, signal lights, and other pyrotechnics.

[1] By Samuel McRoberts. Adapted from an address in Bridgeport, Conn. Printed in the *Iron Age* (March 14, 1918), pp. 686–88.

Ed. Note.—Mr. McRoberts is vice-president of the National City Bank of New York. He is one of the many American business men in government service, being chief of the Procurement Division of the Ordnance Bureau of the War Department.

It furnishes the personal equipment of the men apart from clothing and shoes, consisting of such articles as helmets, bolos, knives, canteens, haversacks, cartridge belts, bandoliers, and other miscellaneous personal equipment incident to field service. The Ordnance Department also furnishes the machine guns and drop bombs for the aircraft service.

Behind the lines the Ordnance Department is called upon to provide all forms of heavy artillery on both wheel and railroad mounts. It must also furnish the means for transporting and maintaining this material in working order, consisting of automobile trucks, tractors, motorized machine shops for field service, and extensive permanent machine shops for repairs of all classes of equipment, the repair of gun carriages, and the relining of guns. From a strictly military standpoint the number of divisions to be put into the field roughly determines the program upon which the Ordnance Department must proceed.

At the outbreak of the war the quantity of material on hand or immediately available was negligible. The experience already gained in the European war showed that practically all existing designs for this material were obsolete. To design and provide for the manufacture of the ordnance equipment and deliver it in France as rapidly as it might be required, which was the unprecedented task put up to the Ordnance Department by the American government and the task that General Crozier and his small company of ordnance officers were forced to undertake, the department consisted of 79 officers and 825 enlisted men, and I will undertake to give you some idea of how they fulfilled that obligation.

First, consider some of the difficulties. Take the subject of engineering and design. In respect to rifles there were then in existence about 600,000 Springfield rifles of a type pronounced to be efficient and practical for our needs. However, they had been manufactured only in the government arsenals, with small manufacturing organizations, and it was impossible to increase their production so as to provide the rifles in anything like the time desired. This necessitated a compromise to meet conditions. Manufacturing facilities in this country had already been created by England for the British rifle. Unfortunately the rifle was inferior to that in the hands of our enemies and had to be redesigned and the manufacturing plants re-equipped for the production of an efficient rifle of a modified design.

In field artillery we had worked out designs and specifications for guns that had been enthusiastically approved by the ordnance experts of this and other countries, but the conditions under which we entered the war necessitated many modifications of manufacture, due to the necessity for interchangeability of ammunition with that of our Allies and the enormous difficulties of quick manufacture. All field artillery of the 3-in. or 75-mm. type is horse drawn, which limits the possible weight of the gun and carriage. While the experience of warfare has developed the original simple field piece into a very complicated machine, the original limitation of 650 lb. per horse must still be observed. This makes the design of a field carriage one of the most difficult of engineering operations, and this was still further complicated by the fact that it was necessary to get the guns at the quickest possible rate of manufacture. It ordinarily takes years for designing and perfecting a new type of artillery. To adopt the French and English designs also presented very great difficulties from the standpoint of time. The drawings that existed in this country were out of date—many modifications had been recently made; many of the features of the French gun were secrets of the French Ordnance Office or French artillery manufacturers and could be obtained in accurate form only by the cooperation of experts, and then after prolonged negotiations. For the utilization of existing seacoast and naval guns, special carriages for both wheel and railroad mounts for heavy artillery had to be designed *de novo*.

The high-explosive shell is practically a product of this war and had to be designed not only with a full knowledge of the experience gained by our Allies but with a view to their early production out of materials that could be obtained in this country. The design of tractors, tanks, and motor-repair equipment had to be without precedent or experience.

Never in the history of warfare has chemistry been called upon to play such a large and important part. Not only was it necessary to design propellants from well-known materials, but new combinations had to be arrived at in order to fit our needs for the possible production of the various chemical ingredients. An entirely new element has been introduced by gas warfare. The first use of gas released before a favoring wind has been supplemented by the surer and more scientific way of placing by means of gas-loaded shells, and the proportion of shells loaded with gas is steadily increasing.

Contracts have been let for the production of two and one-half million rifles, of which there have been delivered to date 800,000, and the production has reached 11,000 per day. On rifles we are ahead of our needs, and provision is now being made for closing down one of the rifle factories so as to obtain its facilities for increasing the output of machine guns.

We have contracted for about one million automatic pistols and revolvers. All the pistol facilities, outside of the Colt organization, had to be created. We have received only 160,000 to date, but from now on the production will rapidly overtake the needs. Of small-arms ammunition we have contracted for practically three and one-half billion rounds, and our production has already reached greater proportions than was ever produced by either France or Great Britain. One manufacturer delivered in the past month a quantity of rifle ammunition aggregating more than 125,000,000 rounds.

We have let contracts for 270,000 machine guns of various types and have delivered to the troops 45,000. A large part of the plant capacity had to be created, and heavy deliveries of these guns will not begin until April.

For motives of policy it is not permissible to discuss the details of our artillery program. It was obviously impossible to furnish this artillery short of a year, and, as surplus manufacturing capacity existed in France and England, by furnishing them the raw materials we are meeting our artillery equipment for the first year from that source. Practically all of our artillery program, as planned at present, is under contract, and already we have reached a production equal to 50 per cent of that of France. Two hundred and ten million dollars was expended on this account up to the first of February. In the artillery program is included motorized vehicles amounting to something over 40,000 pieces. The artillery projectiles contracted to date amount to a total cost of over $1,000,000,000 for over 60,000,000 shells of all descriptions. Over 400,000,000 lbs. of explosives are in process of manufacture, and two smokeless-powder plants of a capacity of 1,125,000 lbs. per day are under construction and a third under consideration. Some comparative idea can be gained as to the volume from this incident: At the outbreak of the European war I was asked by one of the European governments to obtain 1,000,000 lbs. of smokeless powder in the United States. When presented to the leading powder manufacturers, they called attention to the unprecedented size of the order and said it could be furnished only by an

extension of their plants, and deliveries would not begin until four or five months after the order was placed. Today we are planning to furnish our own Army four or five times this amount per day.

I do not want to confuse by going into too much detail, but the following figures are significant: We have purchased $23,000,000 worth of leather. We have spent over $50,000,000 in trench-warfare material alone. The demand for pyrotechnics is such as to require the building of a vast fireworks plant after filling up every known manufacturer with all that he would take. Drop bombs for aëroplanes is an item that runs over $300,000,000. In order to get chemical raw materials we have been forced to build many extensive plants calling for a huge outlay. To provide ammonia and nitrates, in addition to the foreign supply two plants, costing approximately $30,000,000 each, are under construction and still others are being planned.

There has been considerable discussion, not always intelligent, as to the best form of organization for war preparation. There has been strong sentiment that it should be civilian organization headed by a business man. From my own study of the matter I am convinced that no business man is qualified to take this responsibility. The plan of what should be purchased and the selection of the type of material and its design are so intimately dependent upon a knowledge of military affairs and the condition of camp life and actual warfare that no civilian can bring to these basic operations the necessary experience. The correct place for civilian help is that of assisting the army experts only as to the business aspects of the program, those of purchasing and manufacturing, and must necessarily be subordinated to the military experience.

6. THE PRIORITY SYSTEM AT WORK[1]

There has been created in the War Industries Board in Washington a Priorities Board, consisting of the chairman of the War Industries Board, the Priorities Commissioner, a member of the Railroad Administration, a member of the United States Shipping Board and Emergency Fleet Corporation, a member of the War Trade Board, a member of the Food Administration, a member of the Fuel Administration, a representative of the War Department, and a member of the Allied Purchasing Commission. This Board has adopted for the purpose of guiding all governmental agencies in the production,

[1] An editorial.

supply, and distribution of raw materials, finished products, electrical energy, fuel, and transportation, the following general classification of industry for the purposes of priority treatment.

Ships—Including destroyers and submarine chasers.
Aircraft.
Munitions, Military and Naval Supplies and Operations—Including building construction for government needs and equipment for same.
Fuel—For domestic consumption, and for manufacturing necessities named herein.
Food and Collateral Industries—(*a*) Foodstuffs for human consumption, and plants handling same.
(*b*) Feeding stuffs for domestic fowls and animals, and plants handling same.
(*c*) All tools, utensils, implements, machinery, and equipment required for production, harvesting and distribution, milling, preparing, canning and refining foods and feeds such as seeds of foods and feeds, binder twine, etc.
(*d*) Products of collateral industries, such as fertilizer, fertilizer ingredients, insecticides and fungicides, containers for foods and feeds, collateral products.
(*e*) Materials and equipment for preservation of foods and feeds, such as ammonia and other refrigeration supplies, including ice.
Clothing—For civilian population.
Railroad—Or other necessary transportation equipment, including water transportation.
Public Utilities—Serving war industries, Army, Navy, and civilian population.

Included with the foregoing list are all necessary raw materials, partially manufactured parts, and supplies for completion of these products.

This list of war industries is to be given as nearly as possible 100 per cent of their requirements. This, the Board points out, "will in some cases practically exhaust and in other cases substantially reduce the available supply, resulting in an acute shortage of certain basic raw materials and products."

RESTRICTION OF NEW BUILDING OPERATIONS

The War Industries Board, with a view to promoting the successful prosecution of the war, states that—

all new undertakings not essential to, and not contributing either directly or indirectly toward winning the war, which involve the utilization of labor,

material, and capital required in the production, supply, or distribution of direct or indirect war needs, will be discouraged, notwithstanding they may be of local importance and of a character which should in normal times meet with every encouragement; and that in fairness to those interested therein notice is hereby given that this Board will withhold from such projects priority assistance, without which new construction of the character mentioned will frequently be found impracticable, and that this notice shall be given wide publicity, that all parties interested in such undertakings may be fully apprised of the difficulties and delays to which they will be subjected and embark upon them at their peril.

This applies to industrial plants which cannot be utilized in the prosecution of the war and to the construction by states, counties, cities, and towns of public buildings and other improvements which will not contribute towards winning the war.

A convenient means of preventing new building operations that are not essential to the prosecution of the war is found in the exercise of priorities in the issue of securities. A Capital Issues Committee of the War Finance Corporation now passes upon applications with respect to proposed issues of bonds, notes, certificates of indebtedness, and other securities, state, county, municipal, or corporate. (Detailed instructions to applicants with respect to such issues may be found in the *Federal Reserve Bulletin* [March, 1918], pp. 168–71.)

FUEL AND TRANSPORTATION PRIORITIES

The coal supply, not only in the United States, but throughout the world, will not prove adequate during the coming year to meet the needs of both war industries and non-war industries. The Fuel Administration has therefore arranged the following list of preferred industries:[1]

Aircraft—Plants engaged exclusively in manufacturing aircraft or supplies and equipment therefor.

Ammunition—Plants engaged in the manufacture of ammunition for the United States government and the Allies.

Arms (small)—Plants engaged in manufacturing small arms for the United States government and the Allies.

Army and Navy cantonments and camps.

Chemicals—Plants engaged exclusively in manufacturing chemicals.

Coke plants.

Domestic consumers.

[1] *Trade Publication No. 1*, April, 1918, U.S. Fuel Administration, Educational Division.

Electrical equipment—Plants manufacturing same.
Electrodes—Plants producing electrodes.
Explosives—Plants manufacturing explosives.
Farm implements—Manufacturers exclusively of agricultural implements and farm-operating equipment.
Feed—Plants producing feed.
Ferro-alloys—Plants producing same.
Fertilizers—Manufacturers of fertilizers.
Fire brick—Plants producing same exclusively.
Food—Plants manufacturing, milling, preparing, refining, preserving, and wholesaling food for human consumption.
Food containers—Manufacturers of tin and glass containers and manufacturers exclusively of other food containers.
Gas—Gas-producing plants.
Guns (large)—Plants manufacturing same.
Hemp, jute, and cotton bags—Plants manufacturing exclusively hemp, jute, and cotton bags.
Insecticides—Manufacturers exclusively of insecticides and fungicides.
Iron and steel—Blast furnaces and foundries.
Laundries.
Machine tools—Plants manufacturing machine tools.
Mines.
Mines—Plants engaged exclusively in manufacturing mining tools and equipment.
Newspapers and periodicals—Plants printing and publishing exclusively newspapers and periodicals.
Oil—Refineries of both mineral and vegetable oils.
Oil production—Plants manufacturing exclusively oil-well equipment.
Public institutions and buildings.
Public utilities.
Railways—Plants manufacturing locomotives, freight cars and rails, and other plants engaged exclusively in manufacture of railway supplies.
Refrigeration—Refrigeration for food and exclusive ice-producing plants.
Seeds—Producers or wholesalers of seeds (except flower seeds).
Ships (bunker coal)—Not including pleasure craft.
Ships—Plants engaged exclusively in building ships (not including pleasure craft) or in manufacturing exclusively supplies and equipment therefor.
Soap—Manufacturers of soap.
Steel—Steel plants and rolling mills.
Tanners—Tanning plants, save for patent leather.
Tanning extracts—Plants manufacturing tanning extracts.
Tin plate—Manufacturers of tin plate.
Twine (binder) and rope—Plants producing exclusively binder twine and rope.

Wire rope and rope wire—Manufacturers of same.
Automobile plants are not in the list.

It should be noted that all industries not included in the list above will have to wait for both fuel and transportation until the requirements of the above have been fully met. This may mean in many cases waiting indefinitely.

At the same time the Fuel Administration has issued a fuel-oil order with the explanation that "the shortage in the amount of fuel oil which can be delivered because of transportation conditions is such that it is clearly a wasteful and unreasonable practice to deliver such oil for uses which are not intimately and directly connected with the prosecution of the war. . . . . The classes specified and the precedence in selling, if the 'pinch' comes in oil, is fixed as follows:"

Railroads, bunker fuel, and oil refineries using or making fuel oil.
Export deliveries or shipments for the United States Army or Navy.
Export shipments for the navies and other war purposes of the Allies.
Hospitals where oil is now being used as fuel.
Public utilities and domestic consumers now using fuel oil (including gas oil).
Shipyards engaged in government work.
Navy yards.
Arsenals.
Plants engaged in manufacture, production, and storage of food products.
Army and Navy cantonments where oil is now being used as fuel.
Industrial consumers engaged in the manufacture of munitions and other articles under government orders.
All other classes.

This applies to the entire region east of the Rocky Mountains.

7. THE REGIONAL ORGANIZATION OF INDUSTRY[1]

Until very recently it has been necessary for manufacturers who desired to secure war contracts to send a representative to Washington to "drum up business." This representative has had to make the weary round of innumerable purchasing divisions of the government, and it has required a man of dauntless courage to succeed in his enterprise. Under such circumstances it has obviously been impossible for the small manufacturer without connections to secure government business. This has been unfortunate, not merely from the standpoint of the individual manufacturer, but also from the stand-

[1] By Harold G. Moulton. From *Your Business and War Business*, a pamphlet distributed by the Union League Club of Chicago, July, 1918.

point of the government; for when the government patronizes only the larger manufacturers, and those with established connections, it inevitably means a congestion of manufacturing enterprise with the attendant evils of inadequate housing and retarded production of war supplies.

To remedy this situation and to decentralize the production of war supplies throughout the United States the Resources and Conversion Section of the War Industries Board, under the direction of Mr. Charles A. Otis, has worked out a plan whereby it is believed that the small manufacturer will be given an equal opportunity with the large one to obtain war business. The primary object is to assemble as quickly as possible detailed information concerning industries in all parts of the country. The official communication states that

> to accomplish this in the most efficient way it has been decided to divide the country into regions and organize them thoroughly under the leadership and with the cooperation of the local chambers of commerce and other business men's organizations.
>
> It is desired to enlist the aid of all classes of industry, and to bring this about it is imperative that all the industries of a given region should be asked to participate whether they are now members of business organizations or not.

Under the plan that has been worked out for bringing the manufacturing resources of the country into more effective cooperation with the government, the country is to be divided into twenty industrial regions, with the following cities as centres: Boston, Bridgeport, New York, Philadelphia, Pittsburgh, Rochester, Cleveland, Detroit, Chicago, Cincinnati, Baltimore, Atlanta, Birmingham, Kansas City, St. Louis, Dallas, Milwaukee, St. Paul, Seattle, San Francisco. The following plan for effecting the organization is suggested by the officials in charge:

1. Organize through Chambers of Commerce and other business associations Industrial Committees with the principal industrial center as headquarters and such sub-divisions as are recommended by the business association of each district.

2. Develop such organization in various classes of industry as well as in area for greatest convenience, to get information of all classes of products in and between regions.

3. Having established such region and sub-region, through the cooperation of the best business men in each district have a survey of the industries recorded in the hands of the section in Washington of the War Industries

Board for information to the various procurement sections of the government.

4. Each region may have in Washington a representative who through the Resources and Conversion Section of the War Industries Board may keep in direct contact with his region and be available to the governmental procurement divisions or the War Industries Board for prompt action in giving data from his region.

The detailed form of organization suggested for each region (subject, of course, to modifications as desired to meet the needs of any region) is known as the Cleveland Plan, which has been for some time in operation. Under this plan each region is divided into eight sub-regions, an important industrial city in each sub-region being designated as a center. Each sub-region has a local War Industries Commission which coordinates all industry within its territory. Within each sub-region manufacturing is divided into the following classes: castings; forgings and stampings; machinery and machine products; rubber products; clay products; chemicals, oils, and paints; textiles and clothing; wood and leather; engineering; automotive. Other classifications may of course be added for important lines of industry.

The administrative organization is as follows: In each sub-region each line of industry is placed in charge of a chairman to be chosen by the industry. The chairmen of the various industries together constitute an executive committee for the sub-region, which is the governing body within the sub-region.

The governing body of the region as a whole is an executive committee composed of the chairmen of the executive committees of the eight sub-regions.

Coming back to the sub-region, the chairman of each industry makes his own sub-classifications. For instance, under castings we may have aluminum and brass castings, gray-iron castings, malleable castings, and steel castings. A sub-chairman is placed in charge of each sub-classification. If the sub-classification is a large one, each sub-chairman may have a committee large enough to enable him to report promptly and in detail the capacity available in all plants in his sub-classification.

With this organization in working order, detailed information of the capacity of the plants in each industry to produce materials will be made available to the chairman of the industry, and by him be communicated to the executive committee of the region. This

regional committee in turn will make this information available to the Resources and Conversion Section of the War Industries Board in Washington, and through this section to the various supply and purchasing officers of the government. Similarly, when government requirements are made known to the Resources and Conversion Section of the War Industries Board, telegraphic communication from this section to the chairman of each region will promptly set the machinery in motion to secure the production of the necessary supplies in minimum time and with maximum efficiency. There will no longer be any necessity for individual manufacturers to go to Washington to secure war contracts. The distribution of the production of munitions and supplies within each region will be accomplished through the representatives whom the industries themselves have chosen.

GENERAL ADVANTAGES OF THE PLAN

It will be seen at a glance that this method of enlisting the productive capacity of the nation in the service of the government is much superior to the haphazard method that has characterized past months:

1. It eliminates "pull" and established connections as a factor in the awarding of contracts.

2. It eliminates the necessity of expensive and time-consuming trips to Washington in the endeavor to secure war business.

3. It saves the time of the government procurement officials, hitherto largely wasted in conferences with individual business men.

4. It provides for the scientific apportionment of the work to be done to the localities and plants best adapted to the doing of the work.

5. It enables individual laborers to remain in their own communities and in their own homes and thus does much to minimize the difficulties of the housing situation.

6. It permits our existing industrial equipment to be turned directly to war uses, thus saving the necessity of new construction with needless using up of raw materials, labor power, and transport facilities.

7. It serves to disrupt as little as possible our industrial fabric and thus to make less difficult the task of reconstruction after the war.

VIII

FOOD AND FUEL

Introduction

The problems of economic organization for war with which the public is most familiar are those of food and fuel. They have made their presence felt in every business establishment and private home in the land. They have brought home to the people the familiar economic fact of scarcity. They have given to all a conviction that in some vague and indefinite way the organization and use of supplies of bread and meat and coal and power are connected with the winning of the war. Yet, in general, popular conceptions of these problems run in terms of their relation to the management of business or the affairs of the household rather than of the larger economic strategy of which they are part.

The discussions which make up this chapter contain nothing new in outlook or general statement. Their main interest is to translate the principles already discussed into terms of the everyday problems of war with which people are most familiar. It is to indicate the relationship of the organization of the distribution and use of a limited supply of an essential commodity to the general problem of industrial mobilization.

The selections below are intended to serve a number of secondary purposes. They indicate the complexity and ramifications of the administrative problems which the war has raised, their interdependence, their inclusion of such seemingly alien things as social traditions and personal habits, and the combination of circumstances upon which their solutions rest. They disclose the great variety of dangers which lie in wait for the administrator who attempts the regulation of production or the control of consumption, and indicate the intelligent approach, careful analysis, and technical knowledge necessary to the successful accomplishment of such tasks. They point to the folly of attempting to impute responsibility to a single individual for the success or failure of a policy which depends upon so wide a variety of conditions. And, last but most important of all, they present material which tends to enlarge and clarify one's conception of the nature of the organization of industrial society.

To these several ends a wide variety of materials is presented below. "Where Hunger Pinches" (Section XXVIII) indicates the need for increased control and the difficulties of enforcing it in a country where food is really short as against a country like ours where the exactions of the food administration have imposed no real burden. The statement of "The Requisites of a National Food Policy" (Section XXIX) serves both to illustrate the application of the principles of industrial mobilization to a particular problem and to show that the national is but a part of a world-wide organization of food. The materials upon "The World's Coal Situation" (Section XXX) perform the same task in terms of another essential commodity. The discussion of "Coal Problems of the United States" (Section XXXI) indicate some of the more important steps in the gradual solution of the fuel problem. The last two readings, concerned with "Competition versus Efficiency in Mining Coal" and "Coal and Electricity in Double Harness," illustrate the complications given to the problem by such seemingly foreign elements as the traditions of the industry and the current status of technology.

XXVIII. Where Hunger Pinches[1]

1. THE SCARCITY OF FISH IN BERLIN[2]

Like so many other foodstuffs, fish has also disappeared from the Greater Berlin market during the war. There is a pressing need, particularly in winter, when, besides the ever-scanty meat ration, experience has proved that other foodstuffs are also not very abundantly distributed in the capital, that the population should receive larger supplies of fish as compensation. The imperial commissioner for the fish supply has given our representative the following information:

Up to about a week or fortnight ago relatively large supplies of sea fish reached Berlin. Now, however, heavy storms have set in in the North and Baltic seas, rendering fishing extremely difficult and, in parts, stopping it altogether. The prospects for future imports of

[1] Ed. Note.—The excerpts which make up this reading are compiled and translated from German and Austrian newspapers by Alfred Maylander. They are to be found in *Food Situation in Central Europe* (1917), which is Bulletin No. 242 of the United States Bureau of Labor Statistics. The original sources of the excerpts are indicated in the bibliographical footnotes.

[2] From *Berliner Tageblatt*, evening edition, September 11, 1917.

sea fish are difficult to estimate. The home catch, which, owing to the abnormally cold winter, was rather small from January to March, increased quite considerably in the spring. The catches were bought up and distributed quickly, but naturally were insufficient to cover the great demand. At present strenuous efforts are being made to increase the fishing industry in order to store up as much as possible for the winter, but too great expectations must not be indulged in.

2. CONTROL OF EGGS IN BERLIN[1]

The egg-supply organization has proved a great failure. Stoppages have continually occurred, and certain districts receive no eggs at all, while others have a surplus. This is undoubtedly due to faulty organization. A special organization, the State Food Association, was formed some time ago in Berlin for the purpose of collecting and distributing eggs. To the great loss of the community, however, the greatest difficulties have, from the start, been placed in the way of this organization. The superior authorities showed so little understanding of the functions of an egg-supply organization that, despite all commercial efforts, no success was obtained. All practical suggestions for improving the prevailing conditions were simply ignored.

3. FOOD EXCURSIONS

During the past spring and summer the food authorities received numerous complaints about the increasing practice among the urban population of going out to the rural districts to secure food illicitly. These "food excursions" were much discussed in the daily press, some papers expressing sympathy for the poorer class of excursionists, who should be distinguished from the richer and merely selfish hoarders.

In Berlin and the province of Brandenburg this injurious practice led to a proclamation by the commanding general, which contained the following statement: "Individuals can not be permitted to seek to obtain in this way an advantage over their fellow citizens. Moreover, people now go out, not merely to buy but to steal food or take it forcibly; they have the effrontery to help themselves to standing field and garden crops, often long before these are ripe. The injury to the farmers and to our future supply is obvious. Robbing the fields and damaging the crops is a crime in war time, and the strongest measures must be taken against it."

[1] From *Berliner Tageblatt*, August 29, 1917.

He therefore lays the authorities under an obligation to enforce a preventive order, and states that where it is necessary military assistance will be available.

4. "MASS FEEDING" IN GERMANY

At least for the period of the war "mass feeding" seems to be thoroughly established in Germany. Of the 563 communes, each with 10,000 or more inhabitants, and with a total population of 26,700,000, there were only 56, with 857,000 inhabitants, without mass-feeding arrangements; 472 communes, with 24,354,090 inhabitants, reported the existence of 2,207 such establishments, of which 1,076 are general war kitchens, 116 middle-class kitchens, 528 factory kitchens, and 487 kitchens of various kinds. Although most towns provided only midday dinners, most kitchens are arranged for at least two shifts of cooks. The average output of the 2,207 establishments amounted in February, 1917, to a daily production of 2,528,401 liters of food, which allowed 10.4 liters daily per 100 inhabitants of the 24,354,000 total inhabitants in question, as against 8.8 liters in January. The highest possible daily output would promise a total of 4,208,741 liters, or 17.8 liters per 100 inhabitants.

The comparative popularity of mass feeding is a good index to the actual condition of the food supply. War kitchens are being increasingly patronized by members of the middle class. The number of middle-class and officials' kitchens and of soup kitchens in Berlin has now almost reached a hundred; 35,000 portions of food and 14,000 portions soup are served daily, and 8,000 portions of bone soup are distributed to heavy workers and children. The portions are generous and a second helping can be obtained at low prices.

5. THE FOOD-CARD SYSTEM[1]

Food tickets are issued in general by three methods. In Berlin and some other towns the porters of the large blocks of flats in which almost everybody lives obtain the tickets from the authorities and distribute them to the individual families. In Munich and a decreasing number of towns, school children and other voluntary helpers take the tickets round. The method becoming most general is, however, to compel each family to fetch its tickets for itself from a local office on one or more fixed dates, arranged so as to prevent an undue rush

[1] Adapted from the *National Food Journal* (London), November 28, 1917.

of applicants. The advantage of this method over the others is that complaints are investigated and settled on the spot. The last occasion on which Leipzig distributed tickets by volunteer messengers to its 155,000 families produced nearly 100,000 complaints. The person who fetches the tickets for a family has to produce their individual police registration cards and sometimes special food-ticket registration documents, and is often requested to bring their birth certificates. The issuing office keeps a card register showing changes in the membership of each family, all such changes having to be reported immediately. Under the first two methods of issuing tickets a receipt has to be given by the recipient. Tickets are taken out at intervals ranging from every three months down to every month or less. The more frequent the issue, the less is the danger of forgery, as the appearance of each successive series of tickets can be varied. Hoarding and anticipation of supplies are prevented by making each ticket valid only for a single week, or fortnight.

The original and simplest form of German food ticket is a card with detachable coupons, printed so as to be difficult of imitation. It now must generally be signed by the holder; it is never transferable. Other varieties used locally for general or special purposes are books containing a page with separable coupons for every article. Such a book occasionally represents the rations for a whole family. On the whole, the use of one card for every article and for every person is found most satisfactory, while general tickets or books are issued with blank coupons to be used in buying any exceptional supplies which the local authority may be able from time to time to provide; e.g., dried vegetables and farinaceous foods are not regularly on sale, but can be bought at irregular intervals on specified coupons of the general food ticket.

The comparatively simple ticket system described above worked well in Germany for bread and flour down to the end of 1915; but it requires for its successful operation the existence of a considerable margin of stocks in the retail shops, so that the ticket holder may be certain of being served in some shop near his home. The extreme scarcity of all foods, which began to prevail in 1916 and still continues, has necessitated the introduction of important complications; and, speaking generally, bread, flour (usually), and sugar are now the only foods to which the simple system still applies. For meat, milk, fats, potatoes, and other foods, especially those which are only distributed occasionally, the purchaser must become the registered customer of a

particular shop, and very frequently he must place his order a week or more in advance. The shop is supplied in exact proportion to the number of its registered customers or of the advance orders received. To prevent the formation of food queues (waiting lines), a number is assigned to every customer, and the tradesman announces in his window what numbers will be served at particular hours. One hour in the day is reserved for persons who prove by a certificate from their employers or otherwise that they could not attend when their numbers were up. These refinements prevent the necessity for a margin; but they involve the issue of special registration tickets, complicate enormously the problem of removals, and subject the public to a very great inconvenience.

In conclusion, one observation may be made by way of caution. The ticket system is the effect, not the cause, of the German food crisis. If it has to some extent lessened the supply of food by discouraging production and dislocating trade, it has undoubtedly saved the nation from early defeat in the war by reducing consumption to a minimum far below any that voluntary effort could have secured.

6. FOOD IN BOHEMIA

The food situation in Bohemia, due in the main to inefficient organization, is very bad. The following official memorandum[1] needs no comment.

1. Potatoes are unobtainable.

2. The butter ration during last year was only 120 grams (4.2 ounces) per household per month.

3. The milk supply gets steadily worse, both in quality and quantity. On July 31, 1917, the allowance for each individual was only 0.06 liter (0.06 quart).

4. Sugar supply is unsatisfactory owing to the inefficiency of the Sugar Central Office in Vienna and transport difficulties.

5. *Meat.*—The allowance of 900 head of cattle which had been promised has been reduced to 565.

6. *Coal.*—Greater Prague before the war used 320 wagonloads of coal daily; only 100 per day are now available.

7. The results of this are that a great part of the population suffers from hunger, and that the children suffer both physically and morally. The number of child beggars has gone up to several thousands. The death rate

[1] Drawn up by a commission of the Prague City Council (see *Prager Tageblatt*, September 11, 1917).

among the general population increases daily. Diarrhea is spreading at an alarming rate in Greater Prague.

7. THE "KIT-BAG" TRADE[1]

We are officially informed that numerous persons, to the detriment of the community, unlawfully obtain food controlled by the state (particularly flour, pulse, potatoes, eggs, butter, milk, fat, sugar, and coffee), in addition to the rations fixed by the Food Office, and that in a markedly increasing degree the authorities are obliged to order the examination of baggage (boxes, baskets, bags, and kit bags) of travelers and pedestrians. This examination will be carried out by the police at the stations in the neighborhood of Vienna, by the revenue guard at the boundary customs offices, and by the gendarmery in the country. Food carried contrary to prohibition will be taken away in every case and handed over to hospitals, cooperative kitchens, and similar public-welfare institutions. People are therefore warned not to render themselves liable to accusations of smuggling of this kind, as in addition to a considerable fine or imprisonment they may expect the confiscation of the food in question.

Our government, which has certainly not been lacking in ordinances, has just brought out another, the "kit-bag" ordinance, which has aroused the greatest bitterness, and indeed despair, in the whole population of Vienna. With unparalleled lack of consideration large and small bags belonging to incoming travelers are examined, not only in Vienna, but also during the journey, and small quantities of food, as, for instance 10 eggs or a bottle of milk, are confiscated. In Bohemia large quantities of flour are sold by small millers without regard to state control, and without ration tickets or cards, in excess of the maximum price; there are no officials to interfere. Here in Vienna articles are taken away from poor women, who, through former connections in the country, manage to pick up here and there small quantities for their children, and these women leave the stations weeping and in despair. I appeal to the government, as I did recently in the municipal council, not to proceed with such petty, irritating methods, which only calculate to disturb and embitter the population.

[1] The first of the paragraphs quoted is from the morning edition of the *Arbeiter Zeitung*, of Vienna, October 7, 1917; the second, from the morning edition of *Die Zeit*, of Vienna, for October 17, 1917.

8. THUS FARES THE TURK[1]

We left Constantinople because it was absolutely impossible for us to live there any longer. You know how difficult it is to procure certain necessaries even in Vienna and Budapest; but we felt a sense of relief when we passed from Turkey into Austria. Austria lacks many things, but Turkey lacks everything. When it is reported that the Viennese are dying of hunger, it may be taken as a form of speech, but in Constantinople this is literally true.

The food-card system has produced the most pitiable results. How can the population be rationed when there is no census? How can a Turkish functionary be induced to keep his books in order and remain incorruptible? Besides, the government depots are for the greater part of the time empty, though speculators are piling up foodstuffs which frequently find their way to Germany. The word *baksheesh* ("graft") has become more than ever the essential word in Turkish.

For many weeks bread in Constantinople smelled of petroleum. But to people dying from hunger nothing is uneatable. Meat, even horse meat and goat meat, is a luxury reserved for the rich. As for the Bosphorus fisheries, they were abandoned a long time ago, owing to the danger from mines and to the fact that all kinds of boats have been requisitioned. To a real Turk black coffee is as necessary as bread and meat. But a kilogram of sugar costs 14 francs ($1.23 per pound) and coffee 15 francs ($1.32 per pound). Last July thousands of Turkish women pillaged the shops of Galata and Pera. In consequence of this the Turkish government requisitioned from merchants rice, potatoes, and sugar, and offered these articles for sale at pre-war prices, but only to Turkish women. This period of plenty lasted a fortnight, and the Turkish women were somewhat calmed; as for the non-Mussulmans, they continued tightening their belts.

XXIX. The Requisites of a National Food Policy[2]

I. THE NATURE OF THE PROBLEM

The food problem has its place as a part of the larger program of adjusting the industrial system to the demands of war. In the various aspects of its readjustment of consumption, production, and

[1] From a letter of a "neutral" recently arrived in Switzerland, published in the *Messager d'Athènes*, of Athens, July 25, 1917.

[2] By Walton H. Hamilton. Adapted from "The Requisites of a National Food Policy," *Journal of Political Economy*, XXVI (June, 1918), 612–37.

distribution of food, it affects profoundly the interests and the efficiency of the people at home and the soldiers at the front. The amount of food which must be produced depends upon the triple demand of the people at home, the civilian population of our Allies, and the forces in the field. Its distribution involves numerous and baffling choice between conflicting interests. Its consumption requires the scrapping of the personal habits of a lifetime and the substitution therefor of others formed in the light of military necessity. The character of the program depends upon the duration of the unusual food conditions which have come in the wake of war. It is complicated by the varied fortunes which four years of war have brought to our Allies. It is affected by dominant tendencies imposed upon the industrial system which the signing of a treaty of peace cannot soon remove. Because of its intimate association with the larger problem of supplies and its dependence upon peculiar circumstance, a statement of the requisites of a food program must wait upon an enumeration of the antecedents to which it must conform. Therefore it seems best, in the pages which immediately follow, to consider: (1) the situation in Germany with a view to the testimony which it gives upon the duration of the current food situation; (2) the peculiar food needs of our principal Allies, Great Britain and France, and of the neutral nations of Europe; (3) the tendencies affecting the production of food which are accompaniments of war; and (4) the peculiar requirements laid upon this country. In view of these it will be possible to outline, not in any adequate fashion, but at least in its main aspects, a food policy for the current emergency.

II. THE FOOD SITUATION IN GERMANY

In some respects Germany's food situation is better, in some respects worse, than that of the other European belligerents. It has the advantage of not losing sight of the ideal of agricultural self-sufficiency in the four decades immediately preceding the war and of quickly giving its attention to the serious defects in the organization of food revealed in the earlier months of the war. Evidence of attention to this problem is revealed in the statistics of agricultural progress between 1887 and 1913. During this period population increased from 48,000,000 to 66,000,000, or 38 per cent. Yet from 1887 to 1912 the supply of vegetable foods increased even more rapidly. The production of rye increased 97 per cent, of wheat 54 per cent, of potatoes 72 per cent, of sugar 251 per cent, and of other food

articles from 44 to 114 per cent. At the beginning of the war Germany was producing nearly all the grain, potatoes, and sugar consumed in the country. In respect to meats the situation was by no means so favorable, only one-fourth of the beef, one-tenth of the pork, and one-twentieth of the mutton consumed being of domestic production. We have little direct evidence upon the increase of production—or more likely the decrease—since the beginning of the war, though there is an abundance of indirect evidence of all degrees of reputability. This indicates that despite the use of the labor of prisoners and an attempt to use food resources to produce only commodities of the highest food value conditions have been fluctuating from bad to worse, but with a steady drift toward worse. The best evidence seems to indicate that Germany has at best only about 70 per cent of the vegetable food and certainly not more than 40 per cent of the animal food regarded as necessary in time of peace. This shortage is important, however, more as evidence of the large part of the population below the subsistence line than of the success of a policy of attrition in bringing Germany to terms.

The greatest promise for Germany is the lands in the East which either have been annexed or have been made accessible by the collapse of Russia. The consensus of opinion among those who know the economic East seems to be that these lands will be of little avail this year. Whether they can be made to furnish a large food supply in 1919 or later depends largely upon the ability of the German government to organize the country for the furtherance of its own purposes.

On the whole, the outstanding features of the German situation, so far as they affect the food problem, are two in number. The first is that, in view of German discipline, there is little to expect from a policy of attrition. The policy of the Allies may force an ever larger part of the population beyond the minimum necessary to keep health in the body for physical toil, but it is not likely to starve the population into surrender. If the war becomes an involuntary hunger strike, Germany's powers of endurance are likely to exceed those of any Western nation. The German armies may be kept back, the German government may be driven into bankruptcy, the German morale may be broken, a victory over German arms may be achieved, but it is safe to say that economic inability to fight is not likely to be a cause of German defeat. So long as the losses in men do not greatly exceed the numbers added to the army by incoming classes, and so long as the industrial system is arranged to supply a large number of men for

fighting and materials for them to fight with, the German government may, if it wills, keep up the struggle. The second important fact is that no matter how soon peace arrives a serious food problem will remain in Germany for some years to come. The production is low and disorganized, the personnel on the farms is far below normal, both in numbers and in ability, and for many groups the standards have been driven far below what is necessary for efficiency. Both of these facts point to the necessity of a food program which looks farther ahead than a few months—one that looks even to the problems of the production and distribution of food a decade after peace.

III. THE FOOD PROBLEM IN ALLIED AND NEUTRAL COUNTRIES

At the beginning of the war France was, as it had been for some time, a country of small farms. No less than 45 per cent of the population belonged to the agricultural class. On the eve of the present conflict France was producing approximately 86 per cent of the cereals consumed and about 85 per cent of the meat supply.

This favorable situation has been radically changed by the war. In the first place, the large percentage of the population engaged in agriculture has caused the draft of fighting men to make larger drains upon agriculture with greater decreases in efficiency than in any belligerent country. In the second place, nitrates for fertilizer, which usually come from Chile, have been very hard or almost impossible to get. In the third place, capital has not been available for improvements, depreciation has gone forward at a very rapid rate, and materials which otherwise would have gone into farm machinery have been diverted to war uses. In the fourth place, a very considerable amount of fertile soil has been usurped for military purposes and an even larger amount has fallen into the hands of the Germans.

France has of course resorted to various devices to overcome these tendencies to agricultural decline. The aged and the very young alike have been put in the fields; the labor of men back from the front, of prisoners, and of Chinese coolies has all been used; the production of certain products has been subsidized; and a rigid system of agricultural supervision by prefects has been established. But in spite of all this the supply of food has diminished and is still diminishing. The most reliable computations indicate that nearly, if not fully, 40 per cent of the agricultural area has been lost to cultiva-

tion and that the fertility of the most important crop-producing sections has declined by from 20 to 30 per cent. To grasp the significance of this one must note that if France were today to try to maintain its consumptive standards of 1913 it would have to import 60 per cent of its wheat, 48 per cent of its rye, 35 per cent of its oats, and 15 per cent of its barley. This general decrease in the consumption of staple commodities indicates the extent to which standards of consumption have been reduced and how close a considerable part of the population is to actual starvation. Yet the most serious aspect of the situation is that the land and its productive equipment are deteriorating from month to month and that the tendencies bringing about a decrease are becoming more and more pronounced. Peace will leave France face to face with a serious food problem.

Because of its peculiar industrial organization Great Britain is very unlike France. Economically the British Isles are but the center of a vast industrial system which ramifies to the corners of the earth. It performs a few economic functions for a large part of the world, and other parts of the world perform many functions essential to the welfare, and even the lives, of the inhabitants of the islands. Most important for our purpose England produces only a very small part of its food supply. The national food supply rests upon the double contingency of production in foreign countries and the shipping available for bringing the food to British ports.

But the crux of the problem is not in production; it is in the shipping situation. The tonnage available for transportation has been greatly diminished by three causes. The first is the diversion of vessels—how large only those in the secrets of the governments can say—to war uses. The second is the large losses through destruction by mines and submarines, losses familiar to every reader of the newspapers. The third is a loss in the number of journeys which a ship can take in a given time, due to circuitous routing to avoid submarines. An attempt has been made to meet the situation by prohibiting the importation of nonessential commodities. But in view of the large number of imports for war uses, imports unknown to Great Britain before the war, the places of the nonessentials are filled without supplying sufficient accommodation to take food from the places where it is most plentiful to English ports. Whatever rosy promises shipbuilding may hold out, at this writing (April, 1918) the combined construction in Great Britain and America is not yet equal to the losses caused by submarines. In view of this serious shortage

relief can be found only by discontinuing long hauls and concentrating shipping upon routes connecting Great Britain with the countries close at hand.

Such concentration merely solves the immediate shipping problem in terms of another problem of production. It makes the food supplies of South America, Australia, and India less available than they were and throws an increased burden upon Canada and the United States. This burden becomes the heavier when it is realized that the war has cut off England entirely from some of its important sources of supply There is little likelihood that ships will be available, before the war is over, in sufficient number to allow a resumption of the old routes of trade and a tapping of the old sources of supply. On the contrary there is every reason for believing that Great Britain will have to depend upon the nearer sources of supply, particularly upon Canada and the United States, for many years after the coming of peace.

What is true of the seriousness of the food situation in France and Great Britain is true, in their several degrees, of the smaller belligerent countries, of their neutral neighbors, and even of non-participating nations far removed from the scene of combat. The great food-producing area is the northern temperate zone, the inhabitants of a large part of which are engaged in the present struggle. The southern temperate zone is of secondary importance. The arctic zones produce only enough for their indigenous populations, and the tropics do not yet produce enough of the staples to satisfy their own needs. Like Great Britain these countries, even though they lie within the great food-producing areas, are not self-sufficient. Italy and Spain, despite great home production, are large importers of grain, and Holland, Denmark, Norway, Sweden, and Switzerland are quite dependent upon imports.

It is characteristic of the war that the great dearth in the good things of life which the diversion of labor, materials, and land to other uses has caused has afflicted neutral as well as belligerent nations. The prices of the essential commodities are relatively steady the world over. A scarcity in one country, due to the war, causes prices to rise, and the higher prices attract goods from other countries in which prices are lower. The movement continues until prices in the exporting country rise enough to make sales abroad unprofitable. In this way countries which scrupulously keep the peace have to share the dearth of nations at war. Conditions alike among the smaller warring

nations and among the neutrals indicate that they have their several food problems, problems which are likely to remain acute even after peace is made.

IV. THE DEPENDENCE OF WAR UPON FOOD

It seems unnecessary to elaborate at length the abstract principles which explain the decrease in food production and the emergence of a food problem in the wake of war. Many of the conditions responsible for the problem are clearly apparent in the presentation of the situation in France and Great Britain given above. Others are familiar to any student of the nature of modern warfare. A few words of abstract statement must suffice.

The first of two general groups of forces which reduce food production in time of war operates directly upon agriculture. Of this group the first and most obvious is the decrease in number and the decline in efficiency of agricultural laborers. Large numbers are drafted for the army who are habituated to farming just at the ages at which they are most efficient. The old men, the women, and the children who take their places are their equals neither in physical efficiency nor in their knowledge of agricultural methods. To this depletion must be added the additional host who are drawn to industrial occupations by the lure of high wages paid in establishments engaged in war work.

The second of this group of forces directly lowering food production is the increasing difficulty of getting the materials which successful farming requires. If fertilizers are imported, war renders them difficult or impossible to procure. If they are of domestic origin, they have to take their precarious chances of transit upon a railway system which is being reorganized to accommodate itself to the expeditious movement of munitions of war. Farm machinery, like the soil, is constantly wearing out, and neglect and misuse, the inevitable accompaniments of management by amateurs, make the rate of obsolescence or depreciation a very high one. New machinery to take the place of that which has been scrapped is at best expensive, because it is made of the very productive elements out of which most munitions of war are made. Moreover, the supply of raw materials may be so limited as to allow little if any of them to find their way into agricultural implements, or it may be that a shipping board puts them far down on the list of priorities of imports. It is also usually impossible for the farmer to pay cash for machinery, and borrowed capital

is hard to obtain in war time, owing to the direct competition of the government which floats loans large enough to absorb nearly all the free capital.

In the third place, the high prices which follow soon after the declaration of war give rise to great waste. Tempted to make profits while the making is good, the farmer is likely to sell even the produce which he would ordinarily keep for seed, trusting to buy in the spring at a lower price. More important still is the depletion in herds, where the increase is slow—a depletion that may cause scarcity for years to come. At present the supply of animals needed for breeding purposes in the United States and Canada, as well as in most European countries, has been reduced almost to the danger-point.

The second general group of forces reducing food production includes conditions which have their effect upon the whole industrial system. In the large they resolve themselves into an increase in the risk and uncertainty which accompanies business enterprise. They include capricious changes in prices, sudden changes in the industrial policy of the government, the inability to determine in advance the real effects of price control, the uncertainty about the duration of the war and what will follow it, and other major and minor forces of dissension. These are but manifestations of the general disarrangement which necessarily accompanies an adjustment of the industrial system to new conditions. The losses involved in adjusting men, materials, processes, and habits to new ends are fairly clear to anyone who has seriously thought about the problem of the relationship of industry to war. Their extent and nature form a subject much too large and complex to be discussed here.

V. THE BURDEN PLACED UPON THE UNITED STATES

The argument above points to a serious shortage of food and a grave food problem which are likely to be with us until the end of the war. It gives no definite promise that this problem will be less acute or even that it will not be more menacing in the future. It points clearly to the United States as the country which must bear the brunt of the task of feeding the Allies. How great this task is and what the resources are with which it must be faced a brief survey of the situation will indicate.

To recite the list of our Allies in the present struggle, or to name the nations which are not our enemies, is to present a catalogue of peoples who are seriously in need of subsistence. England, France,

Italy, Belgium, Portugal, Spain, Switzerland, Denmark, Holland, Norway, and Sweden are in dire need of food. A very large part of the population, of belligerent and neutral countries alike, are not getting enough to make them productively efficient, and no inconsiderable part of them are becoming an easy prey to disease. It is a situation of actual and potential famine in all of Western Europe which the United States is called upon to face.

It is hard for us to realize that the United States is much less favorably situated for producing a huge food surplus than it was thirty years ago. In the interim industrialism had made huge strides in the land, and a great urban population has arisen to eat up a large part of the surplus of food produced by the farms. This change is indicated by a growth of the urban population in the twenty years from 1890 to 1910 from 22,720,223 to 42,625,383, or more than 80 per cent, while rural population during the same period increased from 40,227,491 to 49,348,883, or less than 25 per cent. If the same ratios have been maintained since 1910 urban population has now become one-half of the whole. In terms of food production decidedly more than one-half of our population now produces a very insignificant part of the food which it consumes, for the rural population includes all who live in towns of less than 2,500. The significance of the change is indicated by the following figures of the production, export, and consumption of typical food products. The comparison is between the average of the five-year period ending in 1895 and that ending in 1914. The average production of wheat per year for the former period was 476,678,000 bushels; for the latter 697,459,000 bushels, an increase of 46 per cent. Between these periods domestic consumption increased from 310,107,000 to 588,492,000 bushels, or about 90 per cent, while exports decreased from 166,571,000 to 104,945,000 bushels, or 37 per cent. The average production of corn for the former period was 1,602,171,000 bushels; for the latter 2,752,372,000 bushels, or an increase of 72 per cent. Consumption increased from 1,552,003,000 to 2,790,962,000 bushels, or 79 per cent, while exports decreased from 50,168,000 to 41,509,000 bushels, or 17 per cent. The figures upon sugar, beef, pork, and other staples lead to similar conclusions. The growth of industrial centers has given us an increasingly urban population which has been consuming a larger and larger part of the food surplus.

Our primary concern is of course with current production and current consumption. Taking the leading food products we note that

while in 1915 the production of wheat increased to 1,025,801,000 bushels, of which 332,465,000, or 37 per cent, was exported, the yield fell to 639,000,000 bushels in 1916, and the estimated yield for 1917 is only 656,000,000 bushels. Our current normal consumption is about 575,000,000 bushels, leaving only about 80,000,000 bushels of wheat to be exported, if we continue the prodigal waste of the days before the war. The yield of corn for 1917 is estimated at 3,248,000,000 bushels, an increase of 495,628,000 bushels, or 18 per cent, over the average yield of the five years preceding the opening of the European war. Our crops of barley and rye, aggregating respectively 204,000,000 and 56,000,000 bushels, are not of a size to add appreciably to our surplus of food cereals. Like the corn crop, the crop of oats last year was particularly large, aggregating 1,533,000,000 bushels. These figures indicate that the great increase has been in corn and oats, cereals upon which neither we nor the Europeans have been depending for bread.

An early estimate places the winter wheat crop for the current year at about 1,000,000,000 bushels. Yet these figures, promising as they are, do not indicate the end of the problem. If when the returns are in we have partially escaped the scarcity of last year, it will be indicative rather of a slight respite than of security.[1]

For a time after the beginning of the war the domestic production, or more properly the marketing, of meat increased materially. This is evidenced by an increase in our exports of meat (excluding pork) from 493,848,000 pounds, which was the average for the three years before the war, to 1,339,193,000 pounds for the year ending June 30, 1916, or about 190 per cent. But the figures lose their significance when we remember that before the war Western Europe received only a very small part of its meat from the United States and that the last figure is small when compared with our export of wheat or with the meat annually consumed at home. Yet there is abundant evidence from all parts of the country that stocks are being seriously depleted and that the dearth of breeding animals will prevent so large an annual slaughter in the immediate future. Taken together, these figures indicate the nature and magnitude of the problem of economy in consumption, as well as a complicated problem in production, which we have to face this season and perhaps for some seasons to come.

[1] Ed. Note.—Midsummer crop reports indicate a substantial improvement over the situation that prevailed a year ago.

But our concern cannot stop with so shortsighted a consideration of the problem. If the war is to go beyond the present year we need to make our plans with that contingency in mind. If it stops within the year its effects upon the production of food cannot be immediately halted and the food problem will remain acute for some time to come.

VI. THE ESSENTIALS OF A FOOD POLICY

The analysis of the conditions out of which springs the food problem makes evident the principles which must dominate its solution. The pages above indicate that for many years to come the United States must either produce or save a large surplus of the staple food commodities above the needs of its civilian population. This can be accomplished by, and only by, diverting food and the stuff of which it is made from ordinary peace uses into this surplus available for our military forces and our Allies. Like all the great supply problems, the food problem can find a genuine solution only in a consciously formulated policy of diversion. Its translation into terms of the diversion of limited economic resources to specific ends is easily made. In the newer terms it requires merely a brief statement in conclusion.

First and most obvious is the obligation which the food problem imposes upon the consumer. Within the last year it has become a truism that we can all contribute to a military victory by abstaining from the over-consumption and waste of commodities like wheat, meat, and sugar, which without change of form can be used by our soldiers and our civilian Allies. As yet it is not so clearly appreciated that many of our expenditures upon food get their necessity from social convention rather than from bodily need or physical or mental vigor. Before the war the consumption of food, both in quantity and in the wasteful methods of its preparation, was affected quite largely by a desire to do the proper thing. A great saving may be effected by keeping in mind the principle that the selection of articles for consumption must be based upon their food values rather than their customary positions in the dietary or social budget. More recently we have been trying to save staple foods for war uses by substituting for them other foods diverted from less important uses. As an immediate necessity much can be said in favor of this policy, provided the substitutes can be made to yield the food values which inhere in them. But as a part of a long-time program this is of doubtful wisdom, since the alternative is present of using the resources embodied in these substitutes to turn out products more in keeping

with the conventional standards of American culinary technique. While these and similar measures may be quite proper and fit so far as they go, they do not afford a solution of the food problem. They are based upon immediate considerations, overlook the period of several years during which there is every probability that for the Western world the problem will remain a serious one, and assume that the problem is limited to consumption. They constitute an attempt to solve the problem out of existing stocks of food. At best such a shortsighted policy will yield a bare minimum that will hardly tide the peoples of the allied countries through an emergency. It will not give them the supply of food which is necessary for health, for industrial efficiency, and for a vigorous population in the next generation.

Second is the burden which the food problem imposes upon the producer. It is his duty to see to it that his limited resources are used in such a way as to turn out products of maximum food value in comparison with the resources which have gone into them. Since huge quantities of staple products are required, he must not give his time, the labor of his men, his fertilizers, the use of his invested capital, and the properties of his soil to the costly production of fancy vegetables and meats which are intended to tickle the palate of the dietary aesthete. Under present conditions a non-regulated price system is not a proper guide to agricultural production. It has the double failing of leading too many people to produce articles which in the previous system have commanded high prices, to the end that the quantities of staple commodities are not properly apportioned, and of allowing the production of articles to suit the whims of those who can afford to pay. While it seems necessary to insure prices high enough to tempt farmers to produce, these prices to be effective must be carefully regulated. To the end of proper production the consumer can help the producer by refraining from buying unnecessary food products at prices attractive to the latter and thus tempting him to a wasteful use of resources.

But the real solution of the problem calls for a positive policy on the part of the government. By absolute prohibition, or by a denial of the use of essential materials, the state must see to it that food resources used in the production of nonessential food commodities be diverted to the production of essential commodities. But even more is necessary. The proper solution of the problem requires supplies larger than such makeshifts can offer. The government must see

to it that where possible machinery is forthcoming to take the place of the labor which has gone into the army. It must divert capital from nonessential industrial uses to essential agricultural uses. And where a labor shortage threatens production it must see that an adequate labor supply is found. In resources of the soil the United States lacks nothing; the function of the state is to see that the auxiliary materials are forthcoming and that food be increased even at a sacrifice of nonessential industries.

Third is the burden which is placed upon the state to supervise the proper distribution of food. It must find principles for settling the claims between the civilian populations of our Allies, our armies, and the civilian population at home. In addition the problem of distribution between the individuals which make up each of these groups is a difficult one. Fortunately only the last of these devolves upon those who are responsible for the national food policy. Even the bare outlines of the solution of these problems of distribution would require a great deal more space than this article occupies, and here it must be dismissed with a word. Economic theory and actual practice alike attest the possibility of the solution of these problems by authoritative regulation, including price-fixing. But it is safe to say that no authoritative policy can hope to succeed if it be formulated in ignorance of the nature of the price system and of the relation of particular prices to economic conduct.

XXX. The World's Coal Situation[1]

I. COAL PRODUCTION

The coal industry is the one basic industry most closely connected with the present war. To both the Allies and the Central Powers their respective available coal resources constitute a *sine qua non* for carrying on the war, while in the period of reconstruction after the war coal will unquestionably become one of the most vital factors in determining industrial expansion and the growth of international trade.

Stimulation of coal production has been the factor of prime importance in the world's coal situation ever since the present great

[1] By William Notz. Adapted from "The World's Coal Situation, I," *Journal of Political Economy*, XXVI (June, 1918), 567–612.

Ed. Note.—Mr. Notz is an expert investigator with the Federal Trade Commission.

conflict of nations began. Everything else—prices, wages, transportation, legislation, etc.—has become primarily a means toward the all-important end of producing as much coal as possible. While complete production figures are not available for all coal-producing countries, Table I shows the production of coal in the leading coal-producing countries of the world during the five years from 1913 to 1917.

From Table I it will be seen that the coal production of most of the large coal-producing countries has decreased considerably since 1913. Great Britain, Germany, France, Russia, Austria, and Belgium show greatly reduced annual outputs. In the United States, Japan, China, Spain, and Holland the pre-war level was either maintained or increased. Canada shows a slight decrease. The main causes for the decline in coal production were lack of labor and inability to move coal from the mines owing to car shortage. Strikes, inefficient labor, scarcity of machinery and pit timber were other contributing causes. The decrease in French, Belgian, and Russian coal production was caused by the German military invasion of large parts of the coal fields in those countries.

TABLE I

COAL PRODUCTION IN THE LEADING COAL-PRODUCING COUNTRIES OF THE WORLD

Country	1913	1914	1915	1916	1917
United States	570,048,125	513,525,477	531,619,487	585,372,568	621,409,629
Great Britain	287,698,617	265,664,393	253,206,081	256,348,351	248,473,119
Germany	278,627,497	245,482,135	235,082,000	.....	.....
Austria-Hungary	59,647,957	.....	.....	30,896,388	28,558,719
France	40,843,618	29,786,505	19,908,000	21,477,000	28,960,000
Russia	35,500,674	.....	27,820,632	13,622,400	13,266,760
Belgium	22,847,000	.....	15,930,000	.....	.....
Japan	21,315,962	21,293,419	20,490,747	22,901,580	.....
India	18,163,856	.....	17,103,932	17,254,309	.....
China	15,432,200	.....	18,000,000	.....	.....
Canada	15,012,178	13,637,529	13,267,023	14,483,395	14,015,588
Spain	4,731,647	4,424,439	4,686,753	5,588,594	.....
Holland	2,064,608	.....	2,333,000	2,656,000	.....

II. TRANSPORTATION CONSIDERATIONS

Transportation has become, next to production, the most important problem in connection with the international coal situation. In fact, difficulties of rail and water transportation have multiplied so rapidly during the course of the war that the whole question of

supplying the world's needs of coal at present depends largely upon adequate shipping facilities.

The paramount importance of this phase of the transportation problem has been officially recognized in several special government reports on this subject here and abroad. The Federal Trade Commission reported to Congress "that the coal industry is paralyzing the industries of the country, and that the coal industry itself is paralyzed by the failure of transportation." The coal situation in Canada was described in a report submitted to the Minister of Labour as follows: "Transportation had most to do with the conditions in so far as Quebec and Ontario were concerned. The partial failure of the railroads to meet the situation was probably the main cause of the [coal] shortage, as with transportation available coal could have been had." In Great Britain the first difficulty which arose in connection with the coal situation after the outbreak of war was one of distribution, due to the congestion of railways. An official communication recently issued by the German government states that the inability to meet the demand for coal is solely due to lack of transportation facilities. Limitation of passenger traffic is suggested as a means of meeting the difficulty. Enormous stocks of coal at the mines, it is claimed, cannot be moved due to rolling-stock shortage. In the Scandinavian countries, France, Italy, and South America, all of which depend at present for a large part of their coal supply on oversea shipments, the scarcity of coal-carrying vessels and exorbitant freight rates have become matters of grave concern.

As one means of relieving railroad traffic congestion zoning schemes have been put in operation in Great Britain, the United States, and France. These countries were divided into areas or zones, the interchange of coal between producing areas was restricted, and consuming districts were allotted specific sources of supply. As a further means for economizing railway transport, inland canals have been utilized for coal shipments in this country and in Europe to a greater extent than ever before. For many years practical coal men have advocated the buying and storing of coal by household consumers during the summer months so as to avoid coal-traffic congestion occasioned by rush orders during the fall and winter months. Special inducements in the form of summer discounts were given with this end in view. Nation-wide educational campaigns to bring about greater cooperation of the public in this matter have been organized in several countries, and prospects are that the results attained will have a

permanent beneficial effect, not only on coal transportation but also on the financial side of the coal trade in the future.

III. THE LABOR SITUATION

The labor question, in so far as it affects the world's coal situation, offers several distinct features. Throughout the world a shortage of labor has developed in the coal fields. It has been a matter of vital importance to the governments of all the coal-producing countries to provide for an adequate, steady, and efficient labor supply as a means of keeping the production of coal at the maximum. At the beginning of the war the mistake was made in Great Britain, Germany, and Canada of drawing heavily upon the coal miners for service in the army. This mistake reflected itself almost immediately in a decided falling off in the coal production and made it necessary to send thousands of the enlisted coal miners back to the coal fields. In the United States thousands of men in 1915 and 1916 left the coal fields for more lucrative employment in munition factories, etc., where the scale of wages ranged on an average about 20 per cent higher than wages in the coal fields.

To keep miners from seeking other employment and to remove labor unrest due to wage troubles, liberal allowances for wage increase were made in the regulations governing maximum coal prices. The French law of April 23, 1916, provides that the average wages in mines shall not be in any case below those in effect in 1914 and 1915, and that all payment in kind to the miners or their families, affirmed by local custom, shall be observed. In England the so-called "war wage" containing liberal provisions was established on September 17, 1917. In the United States a special wage increase of 45 cents per ton was provided for by an order of the United States Fuel Administration of October 27, 1917, this being the second wage increase for coal miners in that year. Never before in the history of coal-mining have wages in the coal fields of the world been as high as they are at the present time.

Nevertheless there has been much unrest and numerous strikes have occurred among the coal miners of Great Britain, the United States, and Germany. The main causes for these labor troubles have been shutdowns at the mines on account of shortage of cars, thus decreasing the number of work days, and a heavy increase in mine fatalities, due partly to inexperienced labor and partly to less rigid enforcement of mine-safety regulations in order to speed production.

IV. COAL PRICES

The question of war-time coal prices offers many angles of interest. Everywhere prices have increased far above pre-war levels. Voluntary agreements on the part of producers and dealers to limit prices and profits have failed without exception. In all the leading coal-consuming countries of the world maximum prices had to be fixed sooner or later by government action. In every case the maximum mine prices are considerably above the average scale of prices obtaining in the years immediately prior to the war. In every country where maximum sales prices at the mines were fixed, liberal allowances were made for wage increases to mine workers. In Great Britain present maximum mine prices approximate 6*s*. 6*d*. above the average mine price which obtained during the year ending June 30, 1914. In the United States special mine prices have been fixed for each state, and in many cases also for certain coal fields within a state. The f.o.b. price for bituminous coal in Pennsylvania was in 1913, $1.11 and in 1918, $2.60. Anthracite increased to $4.00 ($4.55 for white ash broken).

In Germany the total increase in mine prices of the Rhenish-Westphalian Coal Syndicate from the beginning of the war to January, 1917, approximated $1.25 per ton.

While a certain degree of uniformity is noticeable in the rise in price levels for coal at the mines in the countries where maximum prices have been fixed, an entirely different picture presents itself if we compare the maximum retail coal prices obtaining under government regulations in different sections of the same country. In most countries the national coal controller has established a uniform maximum margin of profit for all retail coal dealers, while local authorities have fixed maximum retail coal prices for their communities. By reason of the fact that in establishing maximum retail consumers' prices allowances had to be made for increased handling expenses, freight rates, middlemen's profits, war taxes, etc., retail coal prices at the present time universally show a very heavy increase over pre-war prices.

V. TENDENCY TOWARD COMBINATIONS

Mention should be made of the tendency among operators, jobbers, and wholesale and retail dealers everywhere to form voluntary trade associations and combines. In England such a movement on a large scale was initiated by Lord Rhondda just prior to the war, including

not only the colliery owners but also the world-wide coal export trade of Great Britain. In Germany and France coal syndicates and cartels have existed for many years; in fact, in the former country a strong effort was made in 1915 to disrupt the leading coal syndicate, which was averted, however, by government intervention. The combination movement has made itself felt most strongly during the war in the United States. In 1917 the National Coal Operators' Association, the National Jobbers' Association, and the National Retail Coal Dealers' Association were organized. In addition to these national associations, numerous state and local associations have organizations of their own, including about fifty operators' associations in various coal fields throughout the country. In Canada a similar movement is noticeable, as also in Sweden. Shipping pools like the Tidewater Coal Exchange, the Lake Erie Coal Exchange, and its successor, the Coal and Ore Exchange, indicate a similar tendency toward syndication among American coal-shipping interests. On the other hand a parallel movement of combining is noticeable among the miners—the number, size, solidarity, and influence of the miners' unions in all the coal-producing countries having greatly increased during the war.

This universal movement of the coal producers and dealers on the one side and of coal miners on the other to combine for the protection of their common interests represents one of the significant developments in the world's coal situation, and the chances are that in the near future it will speed the various governments to enact remedial legislation in the public interest.

VI. EXPORT TRADE AND BUNKER SITUATION

An analysis of the international coal export situation from 1913 to 1918 reveals some very interesting facts. One of the most significant is the great decline in the coal exports of Great Britain, whose position as a commercial nation rests very largely on her coal export trade. The increased demand for domestic consumption and the decreased available shipping tonnage have brought the total of Great Britain's coal exports from 97,719,996 tons in 1913 down to 51,341,487 tons in 1917. This amounts to a decline in the coal exports for the two years of more than 46,000,000 tons. In comparison with these figures it is interesting to note that the total exports of anthracite and bituminous coal from the United States have increased during the same period from 23,022,746 tons in 1913 to 27,616,500 tons in 1917.

During the war, ocean freight rates on export coal have reached unprecedented figures. As compared with 1914, the last normal year

prior to the war, ocean freights from Atlantic ports to European and South American ports have increased as much as 400 per cent. Scarcity of tonnage, high insurance rates on account of submarine depredations, and high wages for seamen were the chief causes for these high freight rates, although individual tramp steamers sailing under neutral flags apparently seized upon the opportunities for profiteering.

Closely connected with the question of coal exports is that of coaling stations for bunkering purposes. The nation which controls the coaling stations along the international sea routes will have a great advantage over its competitors in international trade. In the past Great Britain was the foremost maritime nation in possession of strategic artificial coaling stations and thus gained control of the bulk of the world's supply of bunker coal. Gibraltar, Malta, Port Said, Singapore, Hongkong, and Shanghai are some of the British coaling stations which encircle the globe. The war has effected great changes. While Germany has lost the few coaling stations she possessed at Tsing-Tau, in Africa, and in the Samoan Islands, American, Japanese, and Dutch coals have won new markets. England's exports of bunker coal have declined from 21,031,550 tons in 1913 to 12,988,172 tons in 1916. In the Far East, Japanese coal has in many places supplanted English coal, and on the entire Northern Pacific coast of Asia, Japanese coal is now predominant. Nagasaki and Yokohama are the chief Japanese coaling ports and are used by practically all coal-burning steamers crossing the North Pacific. In the East Indies the Dutch have recently built up a successful bunker trade. Dutch coaling stations, supplying Sumatra and Borneo coal, have been established at Batavia, Soerabaia, and notably at Sabang, a strategic location at the entrance to the Straits of Malacca and on the direct trade route from Europe to the Far East.

The war has brought about a marked increase in the American bunker coal trade of the Atlantic. The excellent coaling facilities at Panama and Colon give the United States complete control of one of the most important replenishing depots of the world's trade. American bunker coal has also supplanted British coal to a very large extent at the leading South American stations.

VII. BY-PRODUCT INDUSTRY

One of the most far-reaching and salutary effects of the war upon the coal industry in the United States, Canada, and Great Britain is the powerful stimulus it has exercised on the by-product coke industry.

The present war has brought the people of these countries to realize their former dependence on Continental Europe, and on Germany in particular, for the by-products obtained in distilling coal, especially for dyestuffs. Up to a few years ago the United States was the most backward of all great nations in the manufacture of coal-tar products. Since 1915 all this has changed. The old beehive oven is being supplanted by by-product ovens to such an extent that in the three years from January 1, 1915, to January 1, 1918, the by-product coke production has practically doubled and there has been as much gain as in the previous twenty years. In addition to the great stimulus given to the chemical and manufacturing industries by the supply of such an abundance of raw materials, one of the most valuable results of the introduction of the by-product coke ovens is the conservation of our coal supply. It is estimated that the ovens put in operation during the three years mentioned above will save annually to this country the fuel equivalent of 9,000,000 tons of coal. The value of by-products obtained in the manufacture of coke in the United States from 1913 to 1915 was as follows: 1913, $16,925,941; 1914, $17,529,088; 1915, $29,824,579.

In Great Britain the recovery of by-products from coal is being actively encouraged by the government along systematic lines with a view to future expansion of this industry on a large scale. A special Fuel Research Board has been organized for this purpose, and a fuel research station has been established to investigate the problem of replacing the greater proportion of raw coal now used by the substitution of various fuels obtainable from coal after the by-products have been extracted.

XXXI. Coal Problems of the United States

1. OUR HEATLESS "HOLIDAYS"[1]

War's first drastic home regulation, Fuel Commissioner Garfield's coal-conservation order, brought home to everybody, worker or employer, the grim reality of the coal famine, and many who were hit hardest accepted it as a necessary measure to be obeyed with patriotic self-denial. To relieve the coal famine in the eastern states, it will be recalled, all factories in the United States east of the Mississippi River and in Minnesota and Louisiana, with some exceptions, were directed to shut down for five days beginning January 18. Moreover, Monday

[1] Adapted from the *Literary Digest*, Vol. LVI, No. 4, January 26, 1918.

for ten weeks was decreed a holiday on which offices, factories, and stores, except drug and food stores, must use only such fuel as is necessary to prevent damage. The order under which these restrictions were made, according to the Fuel Administration's statement to the press, was "designed to distribute with absolute impartiality the burden," and it added that the Fuel Administration "counts upon the complete patriotic cooperation of every individual, firm, and corporation affected by the order in its enforcement." We read further that the government aims to carry out its plan without "undue interference with the ordinary course of business" and earnestly desires to "prevent entirely any dislocation of industry or labor."

Fuel Administrator Garfield hoped to save 30,000,000 tons of coal and to give the railroads a chance to straighten out the transportation tangle in the eastern states, according to a Washington correspondent of the *New York Tribune*, who notes that the measures were taken by the President and the government heads "as a desperate remedy." The closing down of the greater part of the nation's industries, trades, and business, says the *New York Sun*, is the "fruit of the inane, criminal starvation of the railroads by the government for a generation"; yet regardless of what it may cost any individual or group of individuals, the order is to be "greeted without protest." A surgeon was more welcome than an undertaker, in the view of this daily, and a disaster of the second degree and a temporary one is better than a disaster of the first degree and a permanent one. If the five-day term clears the railroads and the Monday holidays set the trains running with their former clocklike regularity, the *Sun* added, we can resume being the "busiest nation on earth, instead of being an industrial paralytic." While recognizing that the order struck Utica and all cities in the designated territory "a staggering blow," the *Utica Press* holds that there is really nothing a patriotic city could do about it save to accept the situation with as good grace as possible, and if the result hasten the end all will agree that it was a good investment. The *Chicago Herald* considered the order "a tremendous decision" carrying with it a "tremendous responsibility," and while the chief industries of the principal part of a nation can not be stopped even for a day without disorganization and loss, still the country is willing to pay the price "if it is the necessary cost of preventing the suffering of hundreds and thousands, perhaps millions, of individuals and of keeping certain indispensable war and public functions going at their accustomed speed." Although the Fuel Administrator's order is the

most drastic in the history of the country, the *Wheeling Register* considered it justified and instructive of the fact that we are in this war to win, and "upon the people, as well as the soldiers, rest the nation's chances of victory." While the five-day suspension order meant the loss of millions of dollars to the wage-earning classes, the *Register* believed the measure would cheer our Allies and depress Germany, and it urged the people to show their determination by accepting without complaint any sacrifices they are called upon to make. Said the *Buffalo Courier:* "If the sacrifices entailed by it will permit the supply ships now held in port through lack of bunker coal to sail for France and England with their needed cargoes; if it will permit the makers of war supplies in the United States to go ahead steadily with their production of essential materials for the use of our troops abroad, the rest of the country will meet the losses and deprivations entailed with reasonably cheerful philosophy and without undue complaint."

The jolt will give the American people a realization of the "colossal magnitude" of the war, thought the *Memphis Commercial Appeal*, which pointed out that we had to "organize the commerce and the industries of the country on a military basis as well as the actual fighting arm of the nation." The order will put the patriotism of the American people, and especially of the American business man, to "a very stern test," said the *Charleston News and Courier*, by an exhibition of federal power "such as this country has never witnessed until now."

Tolerance colored with disquiet appeared in the comment of some dailies, such as the *Philadelphia Inquirer*, which assumed that the measure was based on good and sufficient reason and said every one hoped the purpose for which the "unexampled sacrifice" was asked would be "successfully accomplished." The *Albany Knickerbocker Press* thought the effect on business would be "very discouraging for the time being," and the effect on Germany would be to "give it renewed hope and much comfort," yet it was convinced that "sometime we will get out of the tangle of incompetence and be on our feet again." If the Administration made a blunder, said the *Baltimore American*, it will be held strictly responsible, but if good results follow the order "no blame will be placed up to it." Yet because of improving coal conditions and the coming warmer weather this journal thought the coal order would not have been necessary if the administration had waited a week or so. Many journals throughout the

country were openly hostile to the coal order, regarding it as a national disaster and a confession of failure on the part of the Fuel Administration.

According to the news columns of the *New York Tribune*, the coal order meant in New York state alone an immediate loss in wages of about $95,000,000. The estimate made for this journal was based on the five "workless days" plus the nine "legal holiday" Mondays. The loss in wages throughout the twenty-eight states involved was estimated at more than $680,000,000. In circles of commerce and finance there was a divergence of opinion similar to that observed in the press. Mr. James B. Forgan, chairman of the Board of Directors of the First National Bank of Chicago, was quoted in a *New York Times* dispatch as saying that while he did not know the fuel situation was so serious as the Administrator's order indicated, still the Administrator undoubtedly had the data before him, and "if the famine is as critical as the order indicates, even this drastic move must be warranted." In the same dispatch Mr. Samuel Hastings, president of the Illinois Manufacturers' Association, said that more than 250,000 employees of members of his organization would be idle while the order was in force, and the number of idle in the state was estimated at 600,000 or more. Mr. Hastings added that while they regretted that conditions should necessitate such an order, "there is just one thing for us to do, and that is to obey it."

From Fuel Administrator Garfield's explanation of the necessity of the order we cull the following:

> The most urgent thing to be done is to send to the American forces abroad and to the Allies the food and war supplies which they vitally need. War munitions, food, manufactured articles of every description, lie at our Atlantic ports in tens of thousands of tons, while literally hundreds of ships, waiting, loaded with war goods for our men and the Allies, can not take the seas because their bunkers are empty of coal. The coal to send them on their way is waiting behind the congested freight that has jammed all the terminals.
>
> It is worse than useless to bend our energies to more manufacturing when what we have already manufactured lies at tidewater, congesting terminal facilities, jamming the railroad yards and side-tracks for a long distance back into the country. No power on earth can move this freight into the war zone, where it is needed, until we supply the ships with fuel.
>
> Once the docks are cleared of the valuable freight for which our men and associates in the war now wait in vain, then again our energies and

power may be turned to manufacturing, more efficient than ever; so that a steady and uninterrupted stream of vital supplies may be this nation's answer to the Allies' cry for help. . . . .

This is war. Whatever the cost, we must pay it, so that in the face of the enemy there can never be the reproach that we held back from doing our full share. Those ships, laden with our supplies of food for men and food for guns, must have coal and put to sea.

2. THE ZONING SYSTEM OF THE UNITED STATES[1]

The question of transportation and car supply at the mines has been perhaps the most difficult war-time problem with which the coal industry of the United States has had to cope. Traffic congestion caused by the extraordinary demands made upon the railroads by war industries, troop movements, etc., has time and again paralyzed the transportation of coal from the mines to the consuming markets. Conditions have been most serious at important railroad gateways and terminals like Cincinnati, Chicago, and New York.

The slow movement of coal cars in transit and delays in returning empty cars to the mines, due in part to the general congestion of traffic prevailing throughout the country, has resulted in what is generally considered the most serious phase of the coal situation, viz., car shortage at the mines.[2] This one factor has done more than all other causes combined to keep down coal production. In most of the coal fields of the country coal mines have been forced to close down for shorter or longer periods, while others have been running on short time, in both cases involving a decreased production. This state of affairs began to develop in the fall of 1916 and has continued to become more serious since then.

A statement given out by the National Coal Association shows the loss in production of bituminous coal on account of car shortage for the period from January 1 to March 1, 1918, to have been 31,128,000 tons. According to the most reliable estimates there has been an average of at least 100,000 miners idle every day for six months.

The experience during the year 1916–17, when numerous coal shortages had developed in different sections of the country, relieved only partly by priority-shipment orders, made it clear that unless

[1] By William Notz (see p. 323). Adapted from "The World's Coal Situation, II," *Journal of Political Economy*, XXVI (July, 1918), 682–89.

[2] Ed. Note.—Cf. selection XXXVI, 2, p. 348, for an indication of the car situation in the summer of 1918.

radical changes were effected with respect to the distribution of bituminous coal the most serious consequences would be likely to result in the immediate future. Accordingly, the United States Fuel Administration, after prolonged conferences with coal producers, jobbers, and consumers, and with traffic and operating officials of the railroads, devised a zone system for the distribution of bituminous coal for the year beginning April 1, 1918.

By an order of the United States Fuel Administrator, dated March 27, 1918, the states, with the exception of the Rocky Mountain and Pacific Coast states, were divided into fifty-seven zones, each of which is restricted to the use of coal from certain producing districts. The Rocky Mountain and Pacific Coast states under the zone system will be dependent for their bituminous coal, except for special purposes, on coal mined in Montana, Wyoming, Colorado, New Mexico, Utah, Washington, and Oregon. The whole zoning plan applies only to bituminous and cannel coals, and not to anthracite coal or coke. In order to provide for consumers who require illuminating or producing gas, by-product coking, metallurgical smithing, or other particular purposes, or require special coals which are not produced in the coal districts from which the zoning plan permits shipments to be made, special permits covering such cases are issued. The zone system affects all bituminous coal except (1) coal for railroad fuel, for which special arrangements are made; (2) coal for movements on inland waterways, which is in no way restricted by the system, (3) coal delivered to Canada, which is subject to regulations of the Fuel Administration.

The purpose of the plan is to save transportation by the elimination of unnecessary long hauls and avoidable cross-hauls, thereby conserving the car supply and increasing car utility and the production of coal. The method of enforcement of the zoning system is simple. The United States Fuel Administration prohibits distribution beyond the limits of the zone, and the Railroad Administration supplements these prohibitions by railroad embargoes.

A statement issued by the United States Fuel Administration in connection with the zone order states that the general effects of the zone system is to restrict eastern coal to eastern markets and to fill the shortage in the Central and Western states with nearby coal produced in those states. In addition to the saving in transportation the system will provide for the possible retention of something like 5,000,000 tons of coal for the Eastern states which heretofore has gone

West by rail. It will eliminate the movement of more than 2,000,000 tons of Pocahontas coal to Chicago and other western points over a haul of about 660 miles. Chicago is to obtain this tonnage from southern Illinois mines with an average haul of 312 miles. On shipments of 550,000 tons annually from Kanawha districts to Wisconsin points it is planned to save about 2,500,000 car miles; on the movement from southeastern Kentucky to Chicago the saving is estimated at about 800,000 car miles, and the elimination of the Indiana to Iowa movement will save 1,600,000 car miles. The movement of approximately 300,000,000 tons of bituminous coal, or 60 per cent of the total production, will be regulated by the zone system.

3. THE OUTLOOK FOR 1918–19[1]

	1917 Amount	1918–19 Amount	Percentage of Increase 1918–19 over 1917
Industrial	204,907,000	242,024,000	18
Domestic	66,915,000	75,678,000	13
Gas and electric utilities	33,038,000	37,941,000	15
Railroads	155,000,000	166,000,000	7
Exports	24,000,000	24,000,000	0
Beehive coke	52,450,000	52,450,000	0
Bunker—foreign	7,700,000	10,000,000	30
Bunker—domestic, including Great Lakes	5,000,000	5,000,000	0
Used at coal mines for steam and heat	11,000,000	12,500,000	14
Total	560,010,000	625,594,000	12
Used from storage 4,375,000			
Exports 907,000	5,282,000		
Estimated production	554,728,000		
Substitution of coal for oil, mainly in West	.....	2,000,000	
To increase stocks of industrial plants and public utilities outside of New England by ten days' supply	.....	7,000,000	
Total requirements for 1918 without allowance for estimated conservation	.....	634,594,000	
Production 1917	.....	554,728,000	
Increase required	.....	79,866,000	14.4

[1] This table, compiled by the United States Fuel Administration, shows the estimated consumption in net tons of bituminous coal during the coal year 1917 and the estimated requirements for the present coal year.

XXXII. Competition versus Efficiency in Mining Coal[1]

Bituminous coal mining as an industry is beset by conditions which are the occasion of present wastefulness and the justification of apprehension for the future. Scattered and unorganized, most of the individual companies are small and financially weak; no adequate cooperation in engineering practice exists; new developments are slow of growth; coal is mined for the most part by conservative, long-established practice. With no methods of storage developed, the average mine can mine coal only when railroad cars stand ready to receive it; a fluctuating demand, accentuated by seasonal variation, leads to instability of operations; many mines in normal times must close down in slack periods, with destructive effect upon the conditions and supply of labor. For years the price of coal at the mine has been from $1 to $1.15 a ton, a figure so low that only the best and most easily obtainable coal could be extracted by the cheapest methods of mining, irrespective of the waste involved; the tonnage of thin-seam and high-cost areas sacrificed in the process amounts to more than half the total coal produced to date. Many districts have been burdened with a leasing system that obligated the company to remove a given tonnage each year, irrespective of market demand or price, with the result that the richest spots were drawn from seam after seam with irretrievable loss to future needs. Miners' unions in general have fixed wages on the basis of thick and easily worked seams and imposed such severe penalties upon inferior conditions that the operator is precluded from introducing new and improved methods.

The bituminous industry deals with a necessity that is lending itself less and less to competitive production. Competition is incompatible with economy, because coals expensive to mine cannot compete on a commercial basis with those which may be mined cheaply, and the two, in general, occur in such intimate association that the first, under present conditions, must be sacrificed in order to get the second. If the price is arbitrarily fixed high enough to cover the extraction of high-cost coal, society will pay too much for low-cost coal. If, on the contrary, the price is allowed to seek a natural level, the high-cost coal cannot be extracted and much of it becomes permanently lost.

[1] By Chester G. Gilbert and Joseph E. Pogue. Adapted from "Coal: The Resource and Its Full Utilization," Smithsonian Institution, *United States National Museum Bulletin 102*, Part 4, pp. 20–25.

Ed. Note.—Messrs. Gilbert and Pogue are associated with the Division of Mineral Technology of the United States National Museum.

It may be asserted that we should use up the cheaply obtainable coal first, and then later, when necessary, turn to the coal more expensive to produce. Such would be advisable were it not for the fact that the fat and the lean occur intimately mixed, and we cannot later return and glean the unused values. This limitation is set by the geological occurrence of coal and cannot be changed. The only way by which coal can be mined effectively is for the price to be adjusted to the mining costs of each mine, and even to those of different parts of the same mine. Obviously this would require a pooling of interests—in short, integration.

Bituminous coal, therefore, is a necessity which cannot be produced advantageously under competitive operation. It has become by its very nature a public utility, and its administration as such, with integrated activity, is the only practicable way by which its full service can be secured.

While the price of coal to the consumer has been too high, the price of coal at the mine has been so low that it has been a small factor in the ultimate cost to the public. That is evident in the contrast between one dollar and the figure the consumer pays. The price of coal at the mine mouth, however, has been slowly advancing; the upward tendency is natural and if left to itself will become stronger and stronger as more and more of the easy-to-get coal is mined. At the present moment the price at the mine is low because of the apparent abundance of easy-to-get coal; but within a few years (if not already), with the exhaustion of cheaply mined coal, the mining costs are bound to attain a rank more consequential in effect upon the ultimate price. It is even now very generally conceded that the "day of cheap coal is over." While integrated mining would add slightly to the average ton cost of coal at the time, the effect would be to relieve the further upward tendency from the acute increase which present conditions will inevitably create. The result, in fine, will be to prolong to the utmost the period of cheap coal.

The advantages of integration in coal production are well known in other countries. The thin seams of the eastern coal fields of Canada can be worked only under a cooperative system, as pointed out by the Canadian Department of Mines. Belgian mining law imposes the obligation of cooperative measures upon the coal-mining concessionaire. Cooperative coal marketing has been successfully practiced in many parts of the world, notably in Germany and in the Transvaal.

In short, coal as a resource demands cooperative measures of development. This is true of coal in peculiar degree and holds equally for no other resource. The reason is twofold. In the first place, coal deposits do not lend themselves, as do many other types of mineral deposits, to a graded extraction of values according to the strength of economic demand. In the second place, coal as the major source of power is the basis of modern life, and as such imposes upon organized society a direct responsibility to insure its most effective disposition.

The wastes in mining may be decreased through integrated operations. The wastes in distribution may be reduced through the development of hydro-electric power, thus relieving coal of unnecessary duties, and by improvements in utilization, thus destroying the over-dependence upon high-grade coals which now necessitates undue haulage.

The wastes in utilization may be done away with by establishing a method of separating the energy-producing constituents of coal from the commodity values and using the products to their common advantage. The most logical point of attack is the municipality, to which may be attached a public-utility plant converting raw coal into smokeless fuel—artificial anthracite plus gas, or gas alone—and valuable by-products, ammonia, benzol, and tar. Such a plant would supply the fuel needs of the community and ship the surplus by-products to serve as raw material for a coal-products industry, developed thereby to proportions consistent with its importance to social progress.

By-product utilization will give cheaper fuel through the advantageous disposition of all the values contained. It will also end the smoke nuisance, relieve transportation, and cause the growth of a great coal-products industry with ultimate possibilities ranging beyond the grasp of the imagination.

This paper does not presume to set forth the exact methods whereby these results may be attained; the procedures remain to be worked out in detail. Its purpose, however, has been to present a line of attack, drawn up on the basis of the character and extent of the resource, which may be followed to specific advantage. There are no serious technical obstacles in the way; the chief requisite for progress is a popular appreciation of the fact that coal contains greater values than society is getting from it. From this realization will spring a public demand that scientific and technical knowledge be used, not merely in making improvements in the details of present

practice, but in revising that practice itself and shaping a policy of administration more in keeping with what is known to be the potentiality of coal.

XXXIII. Coal and Electricity in Double Harness[1]

The actual amount of energy which we get in driving power from a ton of coal with the most up-to-date methods of combustion and utilization of heat or gas is a very small percentage of what is obtainable theoretically.

Eminent scientists have suggested that we should convert our coal into gas at the pit-mouth and convey it thence by pipe-line to wherever it may be required. This would, no doubt, save an immense amount of transportation and handling of coal, with the accompanying expense and loss; but we have yet to learn whether questions of pressure and other conditions connected with coal-gas would permit of its being practicable, safe, and commercially profitable for long distances and wide areas. It seems more likely that the conversion of coal into electric current in close proximity to the mine would yield better results, a more flexible and safer method of transmission and distribution for long distances, and more useful forms of power, warmth, and illumination than those obtainable from the combustion of gas.

In this connection, the interim report recently made to the Ministry of Reconstruction in Great Britain by the Coal Conservation Sub-Committee is full of suggestion and significance. The British Sub-Committee proposes to supply all industries with electrical power generated at large "super-power stations"—not more than sixteen in number for the whole country—and to eliminate or combine all smaller stations.

The primary object of the scheme is to economize the coal supplies. The amount of coal used in the United Kingdom for the production of power is 80,000,000 tons at a cost of, say, £40,000,000 at the pit-head. The Committee confidently states that by an up-to-date and national scheme of electrification 53,000,000 tons of this (£27,000,000) a year could be saved. This, with a saving of the by-products now wasted by the burning of coal in open grates and boiler furnaces, would effect a national economy of £100,000,000 a year. The most economical way of obtaining power from coal on a large scale is by

[1] Adapted from "Coal and Electricity in Double Harness," *Scientific American* (May 4, 1918), pp. 408, 418, and 419.

generating electricity from it. The coal now used, says the Committee, would, if used economically, produce at least three times the present amount of power.

It has been settled conclusively during the past fifteen years that the most economical means of applying power to industry is the electric motor. In the factories put down for the production of munitions during the war 95 per cent of the machinery is driven by electricity, and it is only a question of time for all power to be applied in this way. The problem is not how to apply electric power, but how best to generate it. The development of electricity has been hindered by the multiplicity and the smallness of the electrical undertakings. At the present time the supply of electricity in Great Britain is split up among about 600 companies and municipal undertakings. The average generating capacity of such of these undertakings as possess power stations is only 5,000 horse-power, or about one-fourth of the capacity of one single generating machine of economical size, and about one-thirtieth of that of a power station of economical size. Technically and commercially the big generating station is admittedly the best. The reform proposed by the Committee is to supersede all these small undertakings by laying down throughout Great Britain main trunk lines to be fed by some sixteen "super-power stations."

The generating machines in these stations should be of large size, not less than 20,000 horse-power each. In more important industrial districts machines of as much as 50,000 horse-power might be used with even greater advantage. The generating stations should be on large sites, with ample coal and water transport facilities. It is contemplated that at each generating station by-products be extracted from the coal before it is used for the production of power, and that various electro-chemical processes essential to British industry be carried on near by. The sites for the stations must be outside, not inside, towns. This would improve the health of the great industrial centers by the reduction of smoke and would relieve the congestion of the railway lines in their neighborhood by practically abolishing the carriage of coal.

There already exists in England a practical example of centralized production in electricity for a large area. The northeast coast district, rather larger in area than Lancashire, is served by a group of power companies from one interconnected electrical system. The population of this area is less than that of Lancashire, and the area is therefore less advantageous for electrical supply. But, whereas in

Lancashire, with its multiplicity of electrical undertakings, the price per unit for electric power varies from a penny to two pence or more, the average price paid in the northeast coast district is less than a half-penny a unit, and the use of electric power per head of population is three times as great. A great saving of coal and reduction of smoke has resulted. Apart from the electric-power companies' consumption, practically no coal is burnt on the Tyne for power purposes except by the railways and some collieries. The Tyne shipyards may be said to have adopted electricity to the exclusion of all other forms of power. As a result of the adoption of electric traction on the suburban railways the traffic facilities of the district are greater than those of any other district of similar size. New industries have been established in the district solely on account of the cheap electric power available. Waste heat and gases have been extensively used for the production of electricity, so that electric power is produced as a by-product of two of the largest local industries—the making of pig-iron and coke. These local generating stations are commonly called "waste-heat stations." The first was erected in 1905, and there are now 11 at work.

The Committee foresees, as a result of a national system of electric-power supply, a great increase of the use of electricity for all purposes, with many advantageous results. Factory chimneys would gradually disappear. Railways would be electrified, even for the haulage of goods trains. Smoke would disappear from towns, and coal wagons need run no farther than to the electric-power stations. Electric light would be cheap enough for the poorest, and there would be a large increase in the use of electric heat and power for household purposes.

As showing the importance of the scheme the report says:

> It is scarcely possible to exaggerate the national importance of a technically sound system of electricity supply, because it is essentially one with the problem of the industrial development of the country. The development of such a power system may be likened to the development of the railways of a country, and it is just as impossible to secure economical power generation and supply by each municipal area working independently (which is the position today) as it would be to have an efficient railway system if each municipal area owned its own lines and long-distance transport were provided for by traffic and operating agreements. History shows that in the early stages of railway development exactly the same process of amalgamation had to be gone through.

IX

TRANSPORTATION

Introduction

The two great means of transport—railways and ships—are furnishing in this war the greatest examples of modified state socialism which this country has yet seen. As to the general way in which they are controlled these two services show a fairly close family resemblance, though the forms of organization are technically quite different. The larger railroads and the larger ships have been taken possession of by the federal government and are being operated by the same people, in general, who operated them before, but under orders of the Railroad Administration and the Shipping Board respectively. New ships and new railroad equipment are built on plans made under federal direction, and in both cases the output is being largely standardized. The heads of the Shipping Board and the Emergency Fleet Corporation are men drawn from private business, while the regional directors of the railroad regions and the federal managers of the separate roads are railroad men, usually managing their own roads, under the government's direction. Thus in both cases private enterprise has furnished the traditions and training of the personnel that is making this experiment in socialism.

Besides the points of likeness there are differences between the two services. In the case of shipbuilding, the industry has been virtually re-created, so great has been the expansion and the revolution in methods. In the case of railroads the emphasis is on the task of utilizing an existing and limited plant to its utmost capacity for war purposes, while such new construction as can be completed quickly enough to be of use in the present emergency can be handled by existing plants and existing methods. Another difference is that new cars and locomotives are necessarily used by existing railroad organizations, while new ships built by the Emergency Fleet Corporation are not turned over to pre-war shipping organizations. Great numbers have been turned over to the army transport service.

It is too early to draw any but the most tentative conclusions from our experience in these enterprises. The possibilities of

standardization will have a try-out on a vast scale, and we may learn how to make gains without losing all elasticity and chance for personal preference. It will take time, however, to show whether or not standardization means stagnation in the long run, through increasing the resistance to improvements. The gauge of railroads must of necessity be standardized, and it has not changed since the first uniform gauge was adopted. Perhaps 4 feet $8\frac{1}{2}$ inches is still the best gauge, even though locomotives have grown fifty or a hundred fold in weight, but as we have had no roads using different gauges, it is impossible to prove anything either way.

Curiously enough, when the question is raised whether government operation of railroads will be permanent, the first thought seems often to be, not whether this would be desirable, but whether or not it is inevitable. Certainly it is not easy to suppose that we shall go back to pre-war conditions, for these represented really a transition stage and were anything but satisfactory. Between labor, the companies, and the state and federal governments the real control was anything but unified, and it is natural in such a case for each party to be ready to blame the others for bad conditions and not to strive with the same whole-hearted determination to get results in the face of discouraging conditions. Be that as it may, the roads were underequipped at the outbreak of the war and claimed that they could not finance extensions unless rates were very considerably raised, while a disastrous strike had recently been averted by a special act of Congress granting the demands of the strikers. Altogether our system of control appeared to have reached a crisis.

The return of the properties to the companies should be taken advantage of to settle the standing of the companies in clear and definite terms. For example, the question of the companies' right to a return on investments made out of income could be settled, and any settlement of such a question would be better than none, since the other factors in the problem would adjust themselves to whatever rule might be laid down. As for permanent lessons, it is doubtful if the war can teach us much about even such an elemental thing as the effect of government guaranty of the returns of private companies; for men work very differently when they feel themselves actively enlisted in serving their country at war.

We are discovering that "morale" is no less important in industries than in armies, and we have also discovered that the traditions and morale of the familiar type of government bureau, and those

which have been associated with private enterprise, with or without state control, are all far from perfect. The present combination, where men with the initiative and drive characteristic of private enterprise are commissioned as servants of the nation (rather than controlled by outside commissions), seems to be in many respects the best compromise we have yet seen. For the future our problem may be how to infuse the morale of public service into organizations which shall still preserve the traditional initiative of private enterprise, so that industry may be in essence a branch of public service, while keeping the advantages of private industry in form of organization, incentives, and rewards. It is not at all certain that any organization can combine these qualities, but experiments may well yield something better than we have had in the past.

XXXIV. Great Britain's Example[1]

On the same day that war was declared (August 4, 1914) the railways of England, Wales, and Scotland—not Ireland—were taken over by the government. The managers opened their sealed instructions and proceeded to carry them out. It had been provided in the act of 1871 that full compensation should be paid to the owners for any loss incurred. The government, however, did not at the beginning announce any terms with the companies. This was left for a later date. Government control, it is important to note, did not mean government ownership. The lines remained the property of the companies. They retained the management of their own concerns, subject to the instructions of the executive committee, and the whole machinery of administration went on as before. The sole purpose at the beginning was to facilitate the movements of troops. But as the war developed, as economy became more and more essential, the scope of the Railway Executive Committee, now in supreme control, became greatly extended.

Working in co-operation with the acting chairman were 12 general managers of leading British lines. Under the central body were groups of committees, each made up of railway experts. The War Office and the Director General of Transport were in touch with the

[1] By F. A. McKenzie. Adapted from "The British Railways under Government Control," *Railway Age Gazette* (December 21, 1917), pp. 1118–21.

Ed. Note.—F. A. McKenzie (1869—) is one of the leading English writers on the war.

Central Committee. There was a constant interchange of ideas, but from the beginning there was no attempt to supersede the railway men in carrying out their work.

Under the terms on which the railways were taken over for the period of the war the government guaranteed to the proprietors of the railways that their net revenue should be the same as in 1913, except when the net receipts for the first half of 1914 were less than the first half of 1913; in that case the sum payable was to be reduced in the same proportion. The entire government traffic—men and freight—was to be carried without any direct charge being made for it or any accounts rendered. This plan was considered satisfactory by both sides. In the majority of cases there had been a reduction of earnings in the first half of 1914 over the previous half-year, and companies were contemplating a still further reduction. The interests of their shareholders being assured, they were able to devote themselves to the work of economical and efficient distribution, quite apart from the usual financial problems. The one weak side of this agreement was that it made no allowance to cover increased interest payments on account of new investments and new capital expenditure since the war began. This point was afterward met by an arrangement that the government should pay interest at 4 per cent on all new capital invested by the railways since August 4, 1914, on new lines, branches, terminals, equipment, or other facilities put into use since January 1, 1913.

The conclusion of the financial agreement between the government and the companies automatically brought about a great economy in the system of railway accounts. The reports of the companies were cut down to a bare minimum, and in many cases even these reduced reports were not sent to the shareholders unless they specially asked for them.

Among the most important economies in handling traffic was, first, the establishment of the common-user of railway companies' open goods wagons. Under the old system the wagon received loaded by one company from another had to be promptly returned to the owning line even though there was no freight for it on its return. Under the common-user arrangement it became available for loading in any direction, thus reducing the haulage of empty vehicles to a minimum. This system of pooling luggage cars came into force on January 2, 1917.

XXXV. The Task of American Railroads[1]

Director-General McAdoo commands an army larger than Pershing's army in France,[2] and second only in size and importance to our entire military force on both sides of the Atlantic. The army of railroad employees numbered in 1916 nearly a million and two-thirds, and if it were to lose its fight against the difficulties of war-time traffic the military army would be crippled and the war would be lost. The demand for transportation has been so great that the roads could not meet all of it, though they carried more freight in 1916 and 1917 than ever before. The character of the war demand, however, has been even more exacting than the amount of it:

(1) Export business enormously increased, at the same time that ship sailings became fewer, more irregular, and guarded with a veil of secrecy. Hence freight piled up in the ports till cars could not be unloaded, and the roads lost the use of cars and of the yard space they occupied. (2) Much coastwise shipping was diverted to transatlantic service, leaving the railroads to haul the freight (largely coal) that had formerly gone by water. Water carriage between our eastern and western seaboards virtually ceased, throwing more transcontinental traffic upon the railroads. (3) War orders were largely concentrated in the manufacturing section of the country, including Pennsylvania and states north and east, where railroad traffic is already densest. This condition was aggravated at the start by the lack of systematic cataloguing of the manufacturing possibilities of different sections and the lack of administrative machinery for diffusing orders as much as possible. (4) The large profits on war orders tempted shippers to disregard demurrage charges and use cars for storage, while the general confusion led to ordering many things long before they could possibly be used. (5) Troop movements are irregular and call for large amounts of rolling stock at certain times and places, but generally furnish little or no return load. Thus the difficulties of the railroads' task have been out of proportion to its magnitude.

[1] An editorial.

[2] That is, at the time this was written.

XXXVI. The Roads in Private Hands

1. UNDER THE RAILROADS' WAR BOARD[1]

On April 5, the day before war was declared, Franklin K. Lane, Secretary of the Interior, introduced and had passed by the Council of National Defense the following resolution:

Resolved, That Commissioner Willard be requested to call upon the railroads to organize their business so as to lead to the greatest expedition in the movement of freight.

Acting in accordance with this resolution, the principal railroad executives of the country met in Washington on April 11, 1917, and resolved that during the war they would coordinate their operations in a continental railway system, merging during such period all their merely individual and competitive activities in the effort to produce a maximum of national transportation efficiency. The direction of the continental railway system thus organized was placed by the railroads in the hands of the executive committee of the Special Committee on National Defense of the American Railway Association. This executive committee was also known as the Railroads' War Board.

Under this resolution the railroads of the United States continued to be operated under private ownership and private management until December 28, 1917.

2. ACCOMPLISHMENTS UNDER PRIVATE OWNERSHIP[2]

Approximately complete statistics of freight movement during the first six months after the United States entered the war—that is, April to September, inclusive—which have been compiled by the Bureau of Railway Economics for the Railroads' War Board, disclose that in that period the railways not only handled far more traffic than in any earlier six months of their history, but also as much as in any entire year prior to 1907.

[1] By Max Thelen. Adapted from "Federal Control of Railroads in War Time," *Annals of the American Academy of Political and Social Science*, LXXVI (March, 1918), 16–21. Copyright by the American Academy of Political and Social Science, 1918.

ED. NOTE.—Mr. Thelen is a prominent railway attorney and chairman of the War Committee of the National Association of Railway and Utilities Commissioners.

[2] Adapted from "An Unprecedented Six Months' Record," *Railway Age Gazette*, LXIII, No. 25 (December 21, 1917), p. 1112.

It will be recalled that the years 1906 and 1907 marked the climax of a long period of rapid increase of railroad business which resulted in the longest and most acute congestion of traffic and "shortage" of cars ever known until recent months. It is therefore not without significance that in the first six months of 1917, after the country entered the war, the railways handled as much freight as they did in the entire year 1906.

In 1915 the railways handled only 30 per cent more freight than in 1906, while in 1917 they are handling approximately 100 per cent more than they did in 1906. These facts illustrate not only the enormous increase which has occurred in railway freight business during the past eleven years, but also how swiftly the bulk of the increase has come within the last two years.

It is interesting, as indicating the increase in the efficiency of railroad operation which has occurred since 1906, to note that in that year the average freight train load was only 344 tons, as compared with the record of 675 tons per train made in the months April to September. If the railroads had moved the traffic of these six months of 1917 in the same average train load as they handled the freight of 1906, they would have had to render in these six months about 96 per cent more freight-train service than they actually did render.

The economy effected by this increase of the average train load, and the resulting saving of freight-train service, is the only thing which has enabled the railway system of the country to remain solvent in the face of almost stationary freight and passenger rates and enormously increasing expenses of all kinds. Of course economies have been effected by other means than increases of the train load, but it is by this means that the really big saving has been made.

3. REASONS FOR A CHANGE[1]

Probably the most far-reaching action with reference to transportation taken by public authority in a generation or more has been the President's proclamation on December 26, directing the practical transfer of the railroads of the country to government control. The course thus determined upon follows the publication of the findings of the Interstate Commerce Commission on December 5, wherein it is set forth, in reply to the roads' plea for higher rates, that such higher rates would not materially assist their present condition.

[1] Adapted from "Washington Notes," *Journal of Political Economy*, XXVI (1918), p. 91.

From the standpoint of the government three principal reasons are seen for the taking over of the lines:

1. The avoidance of obstructions to transportation due to the routing and division of freight, intended to give a fair share to each line in a given territory.

2. The abolition of preferences to given shippers and kinds of freight, and the centralization of control over priority in shipment.

3. The practical termination of rate controversies and labor discussions as between private individuals and the placing of the roads on a semi-military basis.

The railroads themselves have received the announcement of the President's action with much greater equanimity than could have been expected. They undoubtedly see in the step the following advantages:

1. Assurance of a moderate if not generous income in a period of great uncertainty and difficulty, during which they have been caught between the upper and nether millstones of fixed rates and advancing costs and wages.

2. Termination of the danger that threatened them from the continually maturing obligations which ordinarily they would have little trouble in refinancing, but which, under existing conditions, can scarcely be provided for on any basis.

3. Provision of means for betterment and improvement at a time when such provision can be had practically only through government orders designed to place such requirements ahead of those of private concerns.

Due to recognition of these considerations, investors who had previously regarded the situation with the utmost pessimism have shown much greater confidence and enthusiasm with respect to railroad securities, as is indicated by a rise of from five to ten points in general values.

XXXVII. The Federal Organization Established

1. PHASES IN THE DEVELOPMENT OF FEDERAL RAILROAD CONTROL

The phases in the development of the federal organization of railroads are as follows:

1. On December 26, 1917, President Wilson through power imposed in him in the Army Bill of 1916 took possession and assumed

control of the railways of the country and appointed W. G. McAdoo director-general.

2. Congress in January passed a railroad-control bill.

3. On April 11, 1918, President Wilson issued a proclamation taking over for the government the property of coastwise shipping lines.

4. On May 24, Director-General McAdoo placed in charge of each railroad property a federal manager whose duty it is to report to the regional director.

5. On June 29, the Railroad Administration relinquished from federal control nearly 2,000 short-line railroads whose control by the Administration was regarded as not "needful or desirable."

2. OUTLINE OF THE RAILROAD CONTROL BILL[1]

The salient features of the law may be summarized as follows:

Every railroad not controlled or operated by any other carrier, which has heretofore competed with a railroad system over which the President has taken control, or which connects with such railroad and is engaged in general transportation as a common carrier, is considered as under federal control and entitled to the benefit of all the provisions of this law. Federal control, however, does not extend to street or interurban electric railways having as their principal source of operating income, urban, suburban, or local interurban passenger traffic, or the sale of power, heat, or light (Sec. 1).

Two methods of determining just compensation for the use of the properties of carriers are provided for in the law, first, by agreement with the carrier, and, second, in case agreement is not made, by adjudication of boards of referees appointed by the Interstate Commerce Commission, whose decisions are subject to review by the Court of Claims of the United States (Secs. 1 and 2).

I. COMPENSATION BY AGREEMENT

The President is authorized to make an agreement with and guarantee to any carrier under federal control, making operating returns to the Interstate Commerce Commission, that for each year or fractional part of a year during the period of federal control such carrier shall receive as just compensation an annual sum, payable in installments, such sum to be equivalent, as nearly as may be, to the average

[1] From a circular of the Guaranty Trust Co. of New York, 1918.

annual railway-operating income for the three-year period ending June 30, 1917 (Sec. 1).

The average annual operating income will be ascertained by the Interstate Commerce Commission and certified by it to the President. This certification will be conclusive of the amount for the purposes of the agreement (Sec. 1).

II. EXCESS REVENUE

Any railway-operating income, accruing during the period of control, in excess of such just compensation, will remain the property of the United States (Sec. 1). The agreement shall also contain adequate provisions for the maintenance, repair, renewal, and depreciation of the property, the creation of necessary reserve funds, and for any accounting and adjustments of charges and payments, during and at the end of federal control, which may be necessary in order to return the property of each carrier in as substantially good repair and with as complete equipment as it had at the beginning of federal control, and in order also that the United States may, by deductions from the just compensation provided for or by other means, be reimbursed for any of the above expenses of the property not justly chargeable to it. In making such accounting and adjustments the amounts expended or reserved by each carrier for maintenance, repairs, renewals, and depreciation during the three years ended June 30, 1917, and the condition at the beginning and at the end of the federal control, and any other pertinent facts are to be considered (Sec. 1).

Carriers while under federal control shall not, without the approval of the President, declare or pay dividends in excess of the regular rates during the three years ended June 30, 1917. If carriers have paid no regular dividends or no dividends during this period, they may, with the approval of the President, pay dividends at rates determined by the President (Sec. 5).

The sum of $500,000,000 is appropriated, which, together with any funds available from the operating income of the carriers, may be used by the President as a revolving fund to pay the expenses of federal control, and, so far as necessary, the amount of just compensation. From these funds the President will also provide terminals, motive power, cars, and other necessary equipment, which will be used and accounted for as he may direct and be disposed of as Congress may provide (Sec. 6).

III. ADDITIONS, BETTERMENTS, AND EXTENSIONS BY THE PRESIDENT

The President may order any carrier to make additions, betterments, or road extensions, and to provide terminals, motive power, cars, and other equipment in connection with its property, which may be desirable for war purposes or for the interest of the public. From the revolving fund he may advance to the carrier all or any part of the expense of additions, betterments, or road extensions, and provide terminals, motive power, cars, and other necessary equipment ordered and constructed by the carrier or by the President. These advances are chargeable against the carrier and bear interest at the rates and are payable on the terms decided upon by the President (Sec. 6).

The President may expend any amount from the revolving fund that he deems desirable for the use and operation of canals or for the purchase, construction, and operation of boats and other transportation facilities on inland, canal, and coastwise waterways. In the operation and use of these facilities he may employ any agencies and make any contracts that he deems necessary in the public interest (Sec. 6).

IV. FINANCING OF ROADS

To provide funds requisite for maturing obligations or for other proper expenditures or for reorganizing railroads in receivership, carriers may, during the period of federal control, issue bonds, notes, equipment trust certificates, stock, and other forms of securities, secured or unsecured by mortgage, of which the President approves and deems consistent with the public interest. Out of the revolving fund the President may purchase for the United States such securities, at prices not exceeding par, and may sell them, whenever he deems it desirable, at prices not less than the cost. Securities so purchased shall be held by the Secretary of the Treasury, who, under the direction of the President, shall represent the United States in all such matters in the same manner as a private holder. The President, each year, as soon as practicable after January 1, shall cause to be submitted to Congress a detailed report, for the preceding calendar year, of receipts and expenditures in the purchase and sale of securities and in the operation and maintenance of transportation facilities on inland, canal, and coastwise waterways (Sec. 7).

At proper periods the President shall order the closing of the books, and any net income shall be covered into the Treasury of the United

States to the credit of the revolving fund created by this law. If revenues are insufficient to meet disbursements, the deficit shall be paid out of the revolving fund as the President directs (Sec. 12).

Federal control shall continue during the period of the war and for a reasonable time thereafter, not exceeding twenty-one months from the date of the President's proclamation of the exchange of ratifications of the treaty of peace. The President in his discretion may, prior to July 1, 1918, relinquish control over all or any part of a system of transportation, or at any time during the period of federal control may agree with the owners to do so, or may relinquish all systems of transportation under federal control at any time he deems such action desirable. No right to compensation accrues to the owners from the date of such relinquishment (Sec. 14).

V. CONFLICT OF STATE LAWS

The law is not to be construed to amend, repeal, impair, or affect existing laws or powers of the states in relation to taxation or lawful police regulations except where such laws, powers, or regulations may affect the transportation of troops, war materials, government supplies, or the issue of stocks and bonds (Sec. 15).

XXXVIII. What Federal Control Has Accomplished

1. GENERAL POLICY[1]

The policy of the United States Railroad Administration has been informed and shaped by a desire to accomplish the following purposes, which are named in what I conceive to be the order of their importance:

First, the winning of the war, which includes the prompt movement of the men and the material that the government requires. To this everything else must be subordinated.

Second, the service of the public, which is the purpose for which the railways were built and given the privileges accorded them. This implies the maintenance and improvement of the railroad properties so that adequate transportation facilities will be provided at the lowest cost, the object of the government being to furnish service rather than to make money.

Third, the promotion of a spirit of sympathy and a better understanding between the administration of the railways and their two

[1] By William G. McAdoo. Adapted from "Doings of the United States Railroad Administration." Statement by the Director-General on June 15, 1918.

million employees, as well as their one hundred million patrons, which latter class includes every individual in the nation, since transportation has become a prime and universal necessity of civilized existence.

Fourth, the application of sound economies, including:

(*a*) The elimination of superfluous expenditures.

(*b*) The payment of a fair and living wage for services rendered and a just and prompt compensation for injuries received.

(*c*) The purchase of material and equipment at the lowest prices consistent with a reasonable, but not an excessive, profit to the producer.

(*d*) The adoption of standardized equipment and the introduction of approved devices that will save life and labor.

(*e*) The routing of freight and passenger traffic with due regard to the fact that a straight line is the shortest distance between two points.

(*f*) The intensive employment of all equipment and a careful record and scientific study of the results obtained, with a view to determining the comparative efficiency secured.

The development of this policy will, of course, require time. The task to which the Railroad Administration has addressed itself is an immense one. It is as yet too early to judge of the results obtained, but I believe that great progress has been made toward the goal of our ideals. All those who have had a share in this great work, including especially the members of my staff and the officers and employees of the railways, have shown intelligence, public spirit, loyalty, and enthusiasm in dealing with problems that have already been solved and in attacking those that still await solution.

With their continued co-operation I feel assured of a future in which the lessons of our accumulating experience will be effectively employed to humanize the science of railroading and negative the idea that corporations have no souls.

2. SOME RESULTS[1]

I. FINANCE

The three most important financial acts of the new Railroad Administration in its first half-year were: (1) the allotment of nearly a billion dollars for betterments and extensions, (2) increases in wages which are expected to amount to $300,000,000 in 1918, and (3) (on

[1] An editorial.

the day following the wage increases) sweeping increases in freight and passenger rates.

The total amount allowed for capital expenditures for 1918 was $937,961,318, while proposed outlays amounting to over a third more were eliminated in the final revision. Of this sum, only eighteen millions go to extensions, the rest being fairly evenly divided between the two heads of equipment, and additions and betterments to existing plant. The result should be to enable the roads to cut down their expenses of conducting transportation, which have been unduly swollen by the past season's congestion of freight. The funds for these plant outlays come partly from the surpluses of the roads themselves and partly from the "revolving fund" of $500,000,000 appropriated by act of Congress.

The advances in wages were based on the report of a wage commission, with minor changes, and the largest percentage of increase goes to those receiving the lowest wages. The increases are calculated from the wages of December, 1915, and since that time the roads themselves have increased wages more, in some cases, than the McAdoo order increases them, especially in the higher grades of work, where the men are strongly organized. The Adamson eight-hour law has undoubtedly had the effect of raising wages. The advances were made retroactive, taking effect January 1, 1918, though the order was issued May 26. The wage question is of course always open to further adjustments.

The increase in rates and fares was made for the purpose of meeting extraordinary increases in operating expenses, estimated at from $830,000,000 to $860,000,000 for 1918, including the rise in wages. Freight rates were ordered increased by 25 per cent, except so far as specific increases were ordered for particular commodities, such as coal, coke, and iron ores. The same order levels state rates up to the interstate basis and cancels all export and import rates, thus putting an end to the practise of charging less for the same haul on goods that are going abroad or coming from abroad than on domestic freight. Passenger fares are increased to 3 cents per mile, or 3½ cents in Pullmans (in addition to the Pullman charge), and commutation fares are raised 10 per cent. These new rates should yield enormous increases in operating revenues over the $3,824,419,739 earned by the roads in 1917. There is little danger that the roads will suffer serious loss by reason of any shrinkage of traffic resulting from the increased charges. Passenger fares may prove high enough to discourage

unnecessary travel, but the administration appears quite ready to take advantage of this opportunity to reduce passenger schedules and free the roads for the more essential—and more profitable—movement of freight.

II. OPERATION

It was a black time when the federal administration took over the roads, so far as operation was concerned. The lines were congested to the point of breakdown, and blizzards and severe cold (which cuts down the ability of locomotives to make steam) furnished the finishing touches. The traffic became so thoroughly blocked that in the first month of federal control the eastern lines did not move enough freight to pay their operating expenses.

The priority system permitted the yards to fill up with more freight than could be hauled, and one of the first acts of the new administration was to put in its place a policy of embargoing traffic which it thought it could not move. The measures that the Railroads' War Board had taken to increase operating efficiency were carried farther under the new management. Freight cars were made to carry even heavier loads, cars were more freely ordered from one road to another, and the administration's control of the routing of freight was made absolute, regardless of shippers' preferences or of the earnings of particular roads. The policy is to route freight over the shortest line, or, if that is congested, then over the shortest line that is open. A "train-lot plan" of freight moving has been used with great success, the plan hinging on the willingness of the roads to give up their privilege of getting what traffic they can and moving it when they find it advisable not to keep the shippers waiting any longer, whether the train is full or not. Passenger schedules have been still further cut, and perhaps to better effect than before. Under competitive conditions the temptation is strong to keep the through train, let us say, between Chicago and Minneapolis, which competes with the rival road's through train, and to let some less profitable or less strategic train go. Competitive duplications in passenger schedules were by no means eliminated under the Railroads' War Board, though many trains were taken off relatively unprofitable branch lines where there was no duplication. Freight solicitation has been stopped and the city ticket offices of the different roads are being consolidated, while terminal facilities are being pooled to such an extent that some observers doubt if they can ever be "unscrambled."

One of the most hotly debated moves of the Railroad Administration has been the introduction of standardized cars and engines. The chief arguments in favor of this policy are: (1) It will facilitate the free movement of equipment from one line to another and make possible the economies of pooled equipment without the waste that results if rolling stock has to be sent home for repairs or be repaired in shops not fitted for it. (2) Economies in construction are expected from quantity output. The chief arguments against the plan are: (1) The models will be compromises and less efficient than the best now in use. Locomotives in particular are now adapted to the grades and operating conditions of each particular line far more closely than standardized engines could possibly be. (2) Delay inevitably results when new plans must be prepared instead of utilizing those already available. It appears that many of the plans for standardization have had to be abandoned. Meanwhile the ordering of new engines and cars was delayed for several months, with the result that no new rolling stock can be delivered in 1918 until late in the autumn, and then probably less than 100,000 cars, and this in the face of an annual death toll of approximately 150,000 cars.

One excellent example of the difference between the way things can be done under federal operation and the way they have had to be done under private operation is furnished by the raising of demurrage rates. Demurrage is a charge made to shippers who hold cars unloaded beyond a specified time, and the rate was formerly $1.00 per day. The roads had long been negotiating with a view to substituting a sliding scale of from $2.00 to $5.00 per day, and had finally got permission from the Interstate Commerce Commission and several state commissions. Under war conditions shippers often held cars in spite of demurrage (especially contractors whose pay was to be a percentage above their costs). The Director General was able, without waiting for negotiations and consents, to establish a sliding scale, $3.00 for the first day, $4.00 for the second, and so on up to a maximum of $10.00 for the eighth and subsequent days, while offending shippers were put under embargoes.

Such sweeping action as this or the increase in freight and passenger charges was made possible by three facts: (1) A central authority had taken the place of the "system of checks and balances" between privately owned roads and state and federal commissions with their essential conflict of jurisdiction. This central power could act swiftly, but even so, in certain states, there were "vested interests"

in existing differentials between state and interstate rates, and these were strong enough to bring about a modification of the rate order so far as it disturbed these differentials. (2) The responsibility was taken by an agency of government, not by the railroad companies. (3) It could not increase the profits of the companies, since these were fixed under the federal guaranty. These last two facts tended to allay popular opposition, perhaps even more powerfully than the general recognition of the need of "putting up with things" in the emergency of war.

3. PREVENTION OF TRAFFIC CONCENTRATION[1]

The announcement last week by the Secretary of War, the Secretary of the Navy, and Director General McAdoo of the creation of a joint Exports Control Committee with complete power to control the movement of export freight represents one of the most important steps toward co-ordinating war transportation that has yet been taken by the government.

This committee is to have authority to select the port to which specific freight shall be transported for transshipment overseas for the use of the Army and Navy, the allied governments, and others, and it is given the responsibility of deciding the distribution between the various ports of the combined amount of all exports so as to facilitate its handling at any one port and to avoid congestion at any one port. In order to carry out its important task with full knowledge of the various requirements, the committee consists of authoritative representatives of the War and Navy Departments, the Railroad Administration and the shipping interests, and the Traffic Executive controlling the allied traffic.

Long before the United States entered the war the results of a lack of co-ordination and control of export traffic were made evident in serious congestion throughout the eastern industrial section and particularly at the North Atlantic port terminals. Shippers who received their money for goods consigned to the allied governments as soon as the freight was loaded on cars were naturally overzealous in starting freight toward the ports, regardless of the possibilities of handling it at destination or of the capacity of boats to carry it across the ocean. At a time when the country had not yet awakened to the seriousness of the situation railroads were too reluctant to place drastic embargoes and, rather than risk the unpopularity of doing so,

[1] Adapted from *Railway Age* (June 28, 1918), p. 1549.

tried to crowd more freight through the neck of the bottle than could be accommodated. When the embargoes finally were placed it was too late. More freight than could be transshipped had been carried to the eastern terminals, choking the main lines as well as yard and terminal tracks, and when this situation developed to such an extent that it was necessary to unload freight on the ground, the congested condition extended so far back toward the west that it was difficult to return empty cars. The unpopularity of the embargo was so great that freight would often be taken upon the lines and would then have to be embargoed half-way towards its destination, and intermediate lines were blocked in both directions.

This condition became steadily more acute, and, while many people blamed the railroads, the railroads retorted by saying that the difficulty was with the shipping situation. They were carrying freight to destinations as billed, but ships were not available to take away the freight they had delivered. While certain ports were overcrowded, others were not being utilized to capacity, but the railroads had no control over the routing of freight, and goods were sent to the ports where the boats were most numerous. When efforts were made to secure a larger number of sailings to the ports which were not being utilized to capacity, the shipping interests said that the freight offered at those ports was not sufficient to justify them in sending vessels there.

Now the routing of freight has been taken out of the hands of the shipper and placed in the hands of the railroads, and with the creation of the Exports Control Committee there is sufficient authority to direct the railroads where to put the freight and simultaneously to direct the boats to go there and get it. Moreover, it is possible to apply the embargo at the point of origin so that consignments will not be sent to ports where they cannot be handled, but may be diverted to places where they are needed and can be accommodated. This is expected to develop a much more intensive use of the South Atlantic and Gulf ports, which still have much unutilized capacity and still greater potential capacity.

XXXIX. The Express Companies[1]

The four principal express companies operating in the United States, the Adams Express Company, the American Express Company, Wells Fargo & Company, and the Southern Express Company,

[1] Adapted from *Railway Age*, LXIV, No. 23, June 7, 1918.

are to be combined into a new company, effective on July 1, to be known probably as the American Railroad Express Company, which will be given virtually a monopoly of the express business by a contract with the United States Railroad Administration for the carrying on of the express business for all the railroads under federal control.

This plan, which has been worked out after several weeks of negotiations between the representatives of the express companies and the division of public service and accounting of the Railroad Administration, has been sanctioned by the director general in place of the plan earlier proposed, which it is understood was advocated by the express companies, for placing the express companies under government operation in the manner adopted for the railroads.

Under this arrangement there will be no government guaranty of earnings, but the express company will be a private corporation acting as the director-general's agent for carrying on the express business. The character of the service and the character of the rates will be under the director-general's control and subject to initiation by him, and the government will share in any profits above 5 per cent on the capital stock.

Whereas the express companies now have contracts with the railroad companies by which they pay to the latter a fixed percentage of their gross earnings, usually about 50 per cent, for "express privileges," they will now have but one contract with the government, and the director general will receive $50\frac{1}{4}$ per cent of the gross earnings. This percentage was arrived at by taking the average for ten years of the payments by the express companies to the railroads.

Out of the balance of the revenues the express company will pay operating expenses and taxes and, if earned, a dividend of 5 per cent on the capital stock. If more than 5 per cent is available for distribution, out of the next 2 per cent the express company will receive 1 per cent and the government 1 per cent; out of the next 3 per cent available for distribution the express company will receive 1 per cent and the government 2 per cent; any further amounts available for distribution will be divided, one-quarter to the express company and three-quarters to the government.

An important feature of the arrangement is that the new company will be capitalized only to the extent of actual property and cash put into the business, and it was stipulated by the government that this should not exceed $40,000,000. The actual amount determined upon

is $35,000,000, including $30,000,000 issued to the old companies in proportion to the physical properties involved, and $5,000,000 issued at par for cash to represent working capital.

One of the points which received considerable discussion during the negotiations was as to whether railroad employees should continue to act as agents for the express company as station agents now do, receiving as compensation a percentage commission on the business handled. Under the plan decided upon, while the new express company is permitted, upon arranging therefor with the director general, to use railroad employees in express service, the entire compensation of all such employees, both for railroad and express services, will be fixed and paid by the director general, and the express company will compensate the director general for services rendered by such employees to the express company. The Railroad Administration objected to a plan which would give opportunity for competition between railroad and express in the person of the agent, who might be interested in diverting shipments to the express if he were to receive a commission on such business.

The new arrangement will make it possible to avoid a great deal of wasteful duplication of facilities and to eliminate a large amount of accounting with the individual railroads, which, while necessary under the old system of separate contracts between the express companies and the various railroad companies, will be unnecessary under the new system.

The offices of the competing companies will be consolidated or otherwise readjusted to the new conditions and new routes will be opened.

The agreement between the government and the express companies recites that "whereas the director general is of the opinion that the express-transportation business upon the railroads and systems of transportation under federal control can be most efficiently carried on through the agency of a single corporation, which shall act as the sole agent of the government in conducting said business," the express companies shall cause to be organized a corporation for the purpose of carrying on for the director general the express-transportation business upon the railroads under federal control and elsewhere as may be determined by the director general.

XL. The Outcome

1. UNIFIED REGULATION REQUIRED[1]

There is a general impression that the laws of the country have prevented unity of operation among railways, and a consistent attempt has been made to lay at the door of the government the failure of the carriers to cooperate in the use of their physical equipment. The railroads have failed to "get together" merely because in everything except the fixing of rates the railroad business is required by law to be a highly competitive business.

It is useless to assume that the repeal of the anti-pooling clause of the Act to Regulate Commerce and the modification of the Sherman Law would by themselves be enough to bring about voluntary railroad unity. These laws have not stood in the way of the operating unity sorely needed at many terminals, and the mere repeal of these acts will not affect this situation. There is no doubt that the formation of pooling agreements would make it easier for the railroad companies to effect the financial arrangements necessary to a plan of unified operation under private ownership, if the private owners want such a plan. Hence, if private operation is to be resumed, it is desirable that pooling should be permitted; but the mere toleration of pools and rate agreements will not lead to the voluntary unification of physical facilities so long as railroad managers desire to continue their hold on their particular monopoly advantages.

That some adequate system of railroad regulation can be devised which will permit the railroads to prosper and give efficient service at reasonable rates is not to be doubted, and it is with this goal in view that the next steps in railroad regulation must be taken. The United States is not prepared to adopt a program of government ownership of railroads, and it is to be hoped that once the present crisis is passed the railroads will be returned to private management and a system of regulation be devised under which satisfactory results may be obtained. We certainly shall never return to the policy recently abandoned, which has proved such a lamentable failure, and if government ownership is to be avoided we should begin at once to

[1] By T. W. Van Metre. Adapted from "Failures and Possibilities in Railroad Regulation," *Annals of the American Academy of Political and Social Science*, LXXXVI (March, 1918), 3–13. Copyright, by the American Academy of Political and Social Science, 1918.

Ed. Note.—Mr. Van Metre (1884—) is assistant professor of transportation in the School of Business at Columbia University.

take stock of failures and successes and to make plans for the future. There are a number of radical changes that can be safely made which would go far toward establishing our regulative system on a fundamentally sound basis and would render easy the working out of the details of a harmonious and constructive policy.

The dual system of regulation as carried on at present inevitably leads to a violation of the fundamental principles upon which regulation is based: that rates shall be just and reasonable, and that they shall not be unduly discriminatory. While it is possible technically to distinguish between interstate and intrastate traffic, there is in an economic sense no real distinction between them. The fact that nine-tenths of railroad traffic is interstate and consequently already under the jurisdiction of the federal commission would seem to indicate that the remaining tenth could be safely entrusted to its authority without any undue increase of its work and with a considerable gain in the efficiency and uniformity of regulation.

The urgent need for a unified system of regulating the issue of securities by railroad corporations and the almost unanimous belief that this function should be entrusted to federal authority lead one to wonder why it takes so long to secure a law by which this much-needed change may be accomplished. When such a law is enacted it is to be hoped that it will also include provision for some supervision of the expenditure of funds derived from the sale of authorized securities. There is a serious question in many minds as to the wisdom with which the large investments placed in the railroad business in recent years have been used. The wholesale expenditure for the construction of huge passenger terminals at a time when the need for improved freight terminal facilities was probably much more pressing has been looked upon with some disfavor, both on account of the disparity of income from the freight and passenger business and because in many cases the passenger terminals represent costly duplications of effort with results that do not show much progress toward an ultimate solution of the problem of handling a rapidly congesting passenger traffic.

There should be devised some plan by which needed increases in rates can be secured with more expedition and promptness than appears to be possible under present conditions. It is not advisable that the authority of regulative agencies to suspend proposed increases be withdrawn, but it would probably be helpful if the time of rate suspensions were made shorter than is now customary. It is of the utmost importance that the credit of soundly financed railroads be maintained, and

this can be done only if methods are devised for meeting promptly sudden emergencies. Rates are now flexible in but one direction, and it is extremely difficult for the carriers to adjust their charges so as to meet the rapid increases in wages and prices of materials.

And finally, as a *sine qua non* of a resumption of private operation, provision must be made for the permanency of the operating unity now going into effect. Two things will have to be done: (1) The carriers must be permitted to enter pooling agreements by means of which the financial adjustments necessary to operating unity may be effected; (2) the carriers must be required to combine their physical facilities wherever such combination will result in improved service. There is no reason for limiting the unified "continental railway system" to the duration of the war; its proved advantages will be all the more valuable with the return of peace. It must not be expected that the railroad companies will voluntarily enter agreements for unity of operation, though it is highly probable that the present experience with unification under government control will render compulsion less difficult. In the main the joint use of facilities will be confined to terminals, where the wastes of competition have been greatest. Saving must be accomplished, however, through a more elastic system of routing shipments; the expensive duplication in passenger service may be cut down, and the necessity for private car lines and express companies—parasitic organizations which came into existence solely because of the lack of a unified system of operation—will be entirely eliminated; such companies have performed a real public service in the past, but with unity of railroad operation they will exist for no useful purpose. The chief economy will be effected, however, through the reconstruction and reorganization of terminals; it begins to appear that the time is forever past when the shamefully wasteful terminal operation, which exists merely as an evidence of the monopolistic power of a strongly entrenched special privilege, will be permitted to stand unchallenged. The willingness or the unwillingness of the carriers to acquiese in cooperative arrangements which plainly make for increased efficiency will be the deciding factor in the coming controversy over government ownership.

2. SOME INFERENCES[1]

What does the experience of the railways in the war teach us? One group of observers points out that it was neither unwillingness nor incapacity that made it impossible for the roads under private

[1] An editorial.

management to achieve the unity and increased efficiency that the emergency demanded, but restrictive regulation. They point out that the roads have been prevented from combining into unified regional systems by the Sherman Law, from pooling freight by the Act to Regulate Commerce, and from any radical increase of rates or curtailment of service by the need of getting the sanction of many commissions. Moreover, state control of capitalization has hindered the roads from raising new capital in their own way (involving the issue of stock beyond the amount of the actual investment), but it has furnished no constructive substitute. If the roads had only been freed in time (the inference goes) from these limitations, federal operation might not have been necessary to enable them to meet the crisis.

This reasoning is only partly valid. The railroads might have been set free to build up a national monopoly or a series of regional monopolies free from effective control as to rates or capitalization, and the despotic power of this machine might have been used patriotically and efficiently to win the war. But there would have been widespread suspicion of profiteering when rates were increased and service curtailed, and whether this had just grounds or not it would have created a state of opinion among farmers, laborers, and others that would have done incalculable harm to the efficient prosecution of the war by the nation as a whole. The roads have been asking for freedom and power, and the war has proved that freedom and centralized power were needed, but it does not follow that it could safely have been given to private corporations, even in time of war, and still less in time of peace.

Moreover, the kind of control best suited to war is different from that best suited to peace. In war other things must give way to the dominant need of adequate equipment and immediate efficiency. In peace the long-run consequences (perhaps irrevocable) of consolidation may give men pause in spite of obvious immediate gains, and the shipper may be given the benefit of the doubt even if this cuts down revenues enough to delay the provision of equipment. It may have seemed clumsy to cling to the remnants of competition while developing such machinery for the public control of rates as might seem to make competition superfluous as a protection to the public. But in fact the system of control had not been sufficiently matured and tested to justify the public in assuming that it had an all-sufficient substitute for the regulative power of competition. Time would tell

perhaps, but if in the meantime the roads were permitted to consolidate, there would be no turning back. So Congress felt its way slowly, till its leisure for experimentation was interrupted by the Great Disturber.

The increase of rates in May, 1918, is pointed to as justification of the railroads' repeated claims for higher charges, and it is implied that it was the inability to increase rates high enough to offer a prospect of reasonable earnings to new capital which had kept the roads from getting enough equipment to handle the war traffic. The curious fact is, however, that the years of federal control have been years of surprisingly steady increase in earnings, up to the year 1910, taking as a standard the ratio of net operating income to the book cost of roads and equipment. The year 1911 showed the beginning of a decline and 1915 was a very bad year, though earnings were still higher than the best year of the decade 1890–99. The breakdown of the railroads' financing was occasioned by this series of bad years, perhaps, but the underlying cause seems to have been an undue increase of bonds and a resulting narrowing of the margin of earnings above fixed charges, making stocks unduly speculative and bonds less secure. For this condition unwise state regulation may share the blame with the railroad companies.[1] Some railroad men have been virtually demanding that rates be raised till the margin of safety on the existing (swollen) bond issues was as great as on former more modest issues, so that present capital needs could be met by issuing still more bonds, while stockholders pocketed the increased margin of safety in the shape of larger dividends. This is obviously not the best way out of the difficulty.

In 1916 earnings were the highest on record, and those of 1917 were higher yet. But the winter of 1917–18 brought heavy losses, and the increase of rates made by Mr. McAdoo was no more than enough to offset prospective increases in costs. Regulating commissions would probably have waited to see the increases materialize before granting higher rates to offset them, and this delay might have been disastrous in our present emergency. But there are reasons why a commission should be slow in letting private railroads raise their rates, which do not apply to roads under federal operation. Granting that the increase may prove unnecessarily large, Mr. McAdoo can (1) put as much of the money as he likes back into the properties, and

[1] For a further treatment of this problem, though not including the most recent developments, see the *Report of the Railroad Securities Commission.*

(2) since he has possession of the properties the government can make whatever terms seem reasonable in turning back to private ownership these betterments made out of current earnings. Under private ownership such betterments become the property of the companies, included in the valuation on which they must be allowed a fair return, and commissions may well be slow to "make the shippers pay" for betterments in which these shippers have no equity and on which they must go on paying dividends. Thus it is not fair to argue that because certain things were done by the Federal Railroad Administration, therefore it would have been right or expedient to allow the roads, while still in private hands, to do these same things.

XLI. The Shipping Problem

1. THE WAR AND WORLD-SHIPPING[1]

		Gross Tons
World's shipping (except German and Austrian) August 1, 1914		42,574,537
Additional ships built, August, 1914–December 31, 1917		6,621,003
German and Austrian interned ships available for use of Allies		875,000
Total		50,070,540
Losses since 1914.		
Due to ordinary causes	1,600,000	
Due to mines, raiders, and submarines:		
Allies	8,900,119*	
Norway	1,031,778	
Other neutrals	400,000	
Total		11,931,897
Balance actual tonnage available		38,138,643
Net decrease since 1914		4,435,894
Add 2 tons constantly required to maintain each man in France (1,500,000 men×2)		3,000,000
Shortage for merchant traffic, at least		7,435,894

*To October, 1917.

2. GREAT BRITAIN'S SHIPPING PROBLEM, 1917[2]

To counteract the submarine menace, the Shipping Controller has succeeded, first of all, in reorganising the shipping of this country by means of better loading, by taking ships off longer voyages and concentrating them on shorter voyages, and by turning

[1] From a pamphlet entitled *Ships*, distributed by Emergency Fleet Corporation, July, 1918.

[2] By David Lloyd George. Adapted from "Fact v. Fiction," Mr. Lloyd George's Statement on Shipping and Food Supplies, House of Commons, Thursday, August 16, 1917.

ships round more quickly so that they should be able to make more voyages in the course of the year. Although we have a diminished tonnage, we have been able by these means to carry more tons. Our shipping in June and July of this year (1917), compared with June and July of last year, is something like 10 per cent down, and as there is no diminution in the tonnage which is devoted to the carriage of government material for our armies abroad, this means that the diminution in the tonnage available for ordinary imports is down not by 10 per cent but by 20 per cent. In spite of this fact we succeeded in carrying, during the period which I have indicated, 150,000 more tons in British ships.

In addition to this, the Shipping Controller has taken steps for the quickening of shipbuilding. The tonnage built in this country during peace times is, I think, on an average something a little under 2,000,000. In 1915 the shipbuilding came to 688,000 tons. In 1916 it was 538,000 tons. In this year a little over a million tons, nearly 1,100,000 tons, will be built in this country and 330,000 tons will be acquired abroad, so that this year the tonnage which we shall acquire will be 1,900,000. This is purely mercantile marine. Bear in mind the condition under which the tonnage is built. It is the fourth year of the war. There is a difficulty in labour and great difficulty in material. You require steel for guns and shells for the Navy, because the ship-building programme of the Navy has gone up considerably in the course of the present year. In spite of that fact the shipbuilding of the country in this year will not be very far from what it was in the days of peace.

Even now we have not got enough tonnage for all essential purposes. We have got to provide tonnage for France, Italy, and Russia, as well as for ourselves, and we need more ships instead of fewer ships. And I am not going to pretend that there will not be at best a rate of diminution of our shipping which will embarrass us in the struggle, and therefore it is essential, not merely that this country should build, but that the only other countries which have a great shipbuilding capacity should also build. If the United States of America puts forth the whole of her capacity, and I have no doubt, from what I hear, that she is preparing to do it in her own thorough and enterprising way, I have no doubt at all that we shall have sufficient tonnage not merely for this year but for the whole of 1918 and, if necessary, for 1919 as well, because America can expand very considerably her shipbuilding capacity if the real need ever arises for her to do so.

3. THE SHIPPING PROBLEM OF THE UNITED STATES[1]

Shipping is the limiting factor in our participation in the war. Not only does the number of men whom we may place in the trenches depend upon the shipping available for their transport, but their maintenance is also rigidly determined by shipping considerations. Various calculations of the tonnage required to maintain continuously each combatant in active service have been made, ranging from two to fourteen gross tons per man.[2] Among the things to be shipped to maintain each combatant are guns, ammunition, food, clothing, hospital supplies, motors, gasoline, horses and mules, fodder, railway supplies, and mail for the fighting men and the men behind the lines. To maintain an American army of five million men in the field will therefore require from ten to twenty-eight million tons of shipping. If we choose the latter figure, it is roughly two-thirds of the total world's shipping, exclusive of Germany and Austria, in August, 1914.

The shipping problem may be summarized as follows: The materials and supplies for war must pass through a narrow-necked bottle on the way to Europe, and the rate at which this neck expands will determine the rate at which we can effectively mobilize our resources for war purposes. Now, to increase our shipping capacity as rapidly as is required involves not only speeding up the work in existing yards but also enlarging our shipbuilding facilities by diverting labor and capital from less essential work. It means that parts of ships must be manufactured by industrial plants wherever readjustment for such work is practicable. It means, further, that imports and exports of nonessentials must be curtailed in many instances, to the end that tonnage may be released for war business. And the restrictions of these imports and exports in turn necessitates readjustments in the domestic industries dependent upon such trade; the labor and capital employed in such industries must be diverted to the production of forms of war materials for which they may be adapted. In short, the problem before us is nothing less than the organizing of all the productive resources of the United States of America with a single end in view—that of building a bridge of ships across the Atlantic and sending across that bridge in minimum time a maximum of troops and supplies.

[1] An editorial.

[2] From a pamphlet entitled *Ships*, distributed by the Emergency Fleet Corporation, July, 1918.

It has been estimated that in the year 1918 the United States could produce three times as much munitions and materials as could possibly be shipped to Europe, though this estimate has had to be changed because of the release of shipping for transatlantic routes on the part of both England and the United States through a restriction of imports.[1] But whatever the figures, it is certain that our entire program of industrial mobilization waits on shipping.

XLII. Questions of Method

1. SHIPBUILDING STRATEGY[2]

Even to the kind of person who knows what a million tons of shipping looks like, mere figures can give no adequate picture of the problems raised by our shipping situation. Questions arise as to the best organization for the work, the best kinds of ships to build, and the best methods of construction: problems with an economic side, yet not to be settled by the ready-made economic formulas. As for organization, we might have relied wholly on private enterprise, but there are general reasons why this method does not mobilize industry as industry must be mobilized for modern war,[3] and there is no adequate ground for ignoring these facts in the special case of shipping. It does not need enormous freight rates to tell us that shipping is the weakest link in the Allies' chain of war resources and should be granted the very first grade of priority.

The best design of ships is partly a matter of naval tactics, calling for ships that can escape the submarine if possible, or ships that can keep afloat after being torpedoed, or ships that are uniform enough in speed to lend themselves to the convoy system. It is partly a matter of harmonious use of the available resources, so that the building of hulls will not outstrip the building of engines, nor the program be partly nullified by an unexpected shortage of some one limiting factor, whether it be ways on which to build the ships, or houses for laborers in the shipyards, or riveters, or crews for the ships after construction, or skilled ship-carpenters or special shapes of timber for wooden ships.

[1] The restriction of imports under orders No. 1 and No. 2 of the United States Shipping Board will release shipping to maintain in France continuously in the neighborhood of 200,000 men, while the great increase in troop movements from April to August was largely made possible by the curtailment of British foreign trade.

[2] An editorial. [3] See chaps. iii and iv, above.

All these things call for a unified plan and a national policy, in which all the information that is to be had on all these matters is brought to bear on the signing of every contract and the driving of every rivet.

American shipping is in the hands of the United States Shipping Board, and shipbuilding is in the hands of the Emergency Fleet Corporation, created and controlled by the Shipping Board but in effect almost a co-ordinate arm of the federal government. Ships have been commandeered from enemy owners and from neutrals, and ships under construction have been taken over, even when they were being built for our Allies. This, of course, carries with it an obligation to see that American tonnage is utilized as effectively as allied tonnage for furthering the common cause and is not used to carry nonessential freight. So far (July, 1918) the ships actually built and finished under contract for the Shipbuilding Corporation have been very few compared to those requisitioned, but the construction of ships under contract is growing rapidly, and as a result of such measures the governments of the United States and of their Allies have control of by far the greater part of the free shipping of the world.

What sort of ships should be built? Small boats of only one thousand tons, were suggested, with speed enough to outrun the submarines. Not very economical cargo-carriers, to be sure, but the submarines could not sink so many tons of this kind of shipping, and price was not the vital issue. It soon became clear, however, that the nation could not afford to build such boats, not because of the extravagant outlay of money, but because of the more fundamental thing of which the money outlay is only a symptom; namely, the need of getting the greatest possible freight-carrying capacity out of a limited supply of steel, labor, shipyard capacity, and, more than all else, engines and the capacity to produce them. For as Secretary Daniels said: "We [the Navy] can build hulls faster than we can build machinery. The same is true of the shipping board." Under these circumstances we simply could not afford to use engines to drive small ships at high speed, especially as the increase in speed would be very small compared with the increased ratio of horse-power to tonnage. The plants making engines can turn out more horse-power in large engines than in small ones, and a given amount of horse-power can drive more tons of freight in large hulls than in small ones. If the plan for a vast fleet of mosquito-freighters meant that we should put the same cargo-carrying capacity in a more expensive form, we could find the money to pay for it, but it would really have

meant fewer tons of shipping turned out, since no amount of money would give us engines vastly beyond our present output, steel beyond our present consumption, yards with vastly more ways than we now have, and men to build and man the ships and officers to navigate them. For in all these respects we are already doing our best, sparing no outlay. Thus we are forced to build ships large enough to be economical, even though we feel that war is no time to skimp expense on vital war necessities, because we must needs count the resources the expenses represent.

The war demand has stimulated builders to try new forms of ships, thus hastening the progress of the science of shipbuilding perhaps by decades. The shortage of steel has led to the use of wood and concrete, raising highly interesting structural and economic problems, while the "fabricated ship" of steel is a new departure, made possible by quantity production and making possible in turn unheard of speed in construction. To be sure, the saving of time on the ways gives an exaggerated picture of speeding-up, because the building of the ship is really begun before the keel is laid, and the new method means that a larger part of the work is put upon the plants where the parts are made ready. It has been estimated that 90 per cent of the work on a "fabricated" ship can be done away from the yards. But this in itself is a gain, and saving of time on the ways is peculiarly important. The larger the percentage of the work that is pushed back into fabricating plants and the shorter the actual time on the ways, the fewer ways need be built. If the fabricating plants are in existing industrial centers instead of at the shipyards, the need of new housing is considerably reduced. In building re-enforced-concrete ships a new kind of concrete is used, very smooth, tough, and elastic. Concrete has proved its usefulness for barges and has worked well with small steamers, but it has yet to be tried on a large scale in transatlantic carriage, and important technical questions are still unsettled.

Wooden ships raised further questions. A plan for a thousand such ships was made by engineers of the Shipping Board, and wooden shipbuilding was begun by the British in Canadian yards while the unrestricted submarine campaign was still young. At that time the supply of steel was largely pre-empted for naval vessels and other uses and there was not enough available for an adequate program of steel merchant ships, though later large amounts were released for this purpose. Whatever could be done with wooden ships would be, for

some time at least, practically clear gain, since the two types do not compete for materials, for labor (so far as labor immediately available is concerned), or for yard space (in existing yards).

But the hand labor used in old-fashioned wooden shipbuilding is well-nigh a lost art, and the special sizes and shapes of timber required are not easily to be had. The Pacific Coast had tried successfully a new type of ship, somewhat less graceful in shape but using a higher percentage of standard sizes and shapes of timber and calling for less of the expert hand-labor of the old-fashioned ship-carpenter. A ship of this sort, with improvements, was designed for the Fleet Corporation and some contracts were let. The rival design was of the more traditional sort, and the then head of the Fleet Corporation (not himself a shipbuilder) seemed to feel a natural conservatism about committing himself to a design that was said to be not quite "the best," though admittedly perfectly seaworthy and practicable. The wooden-ship program was curtailed, and not until we had been at war for more than a year was a program adopted as ambitious as the original project of a thousand ships. By this time, however, we have learned to shape the timbers in sawmills and to do the final fitting, if any is needed, with an electric "dubbing" machine or an air-driven planer or bevelling side-head, thus making the old-fashioned expert adze-man unnecessary. Pneumatic calking tools and paint sprayers further speed the work.

Forms of contracts made further difficulty.[1] Builders wanted the payment to cover cost plus 10 per cent, while the Fleet Corporation wanted builders to undertake delivery at a fixed lump sum. As a matter of fact, neither form of contract was the best for just this emergency, but it takes time to consider and adopt new forms, and since the Fleet Corporation did not have such forms already worked out, there was delay.

The housing problem presented another dilemma.[2] It was an unprecedented industrial mobilization, and the army must have cantonments wherever existing housing could not be stretched to meet the emergency need. But while houses were needed before anything else if they were needed at all, it sometimes took time and experience to prove that they were needed; that the workmen could not "find a place somewhere" satisfactorily, and that it did not pay to force them to ride long distances to their work in overcrowded conveyances.

[1] See "Forms of Contracts," selection LVI, 4

[2] See Section LX.

In all these matters—designs of ships, forms of contracts, and housing policy—we have "lost" time, not because there was not enough knowledge in the country to meet the emergency, but rather because the existing knowledge was not in the places and in the form in which it would do the most good. The authorities had not possessed themselves of it, focussed the light from many sources on the task of emergency mobilization, and achieved in advance and at leisure the matured judgments and formulated plans which might have prevented costly mistakes and far more costly delays.

Construction has gone ahead as fast as our economic and governmental system could push it, but not as fast as our resources and technical knowledge would have permitted if we had had organized preparedness of ideas, statistics, contract forms, and plans. We have had no economic general staff to make plans, in times of peace, for the economic mobilizations of war, but if preparedness for war is to be our future destiny, it will be plain that such economic mobilization plans are, if anything, more important for the United States than the purely military plans which our existing war college is charged to provide. How such plans can best be provided, utilized, modified, and supplemented, or perhaps even discarded, in emergenices is a difficult question of administration. Under the wrong system bureaucratic fossilization might do even more harm than our unpreparedness, which may have caused some waste motion but has nevertheless achieved results larger than many an official would have dared to plan for.

2. A SHIP BUILT IN TWENTY-SEVEN DAYS[1]

The fastest job of shipbuilding ever done was the construction of the steel steamship "Tuckahoe," 5,500 tons, dead weight, at Camden, N.J. Her keel was laid on April 8, 1918, she was launched on May 5, just 27 days, 3 hours, and 43 minutes after the laying of the keel, and 10 days later, on May 15, was delivered, complete in every detail, after a trial trip, to the United States Shipping Board. One week later she was starting on her first voyage with cargo. The best previous record for the launching of a steel, ocean-going ship was 55 days, made at Seattle earlier in the spring of this year; the average time, even under forced speed, is about 100 days.

The rapid construction of the "Tuckahoe" is a demonstration of the possibilities inherent in the method of shipbuilding that has

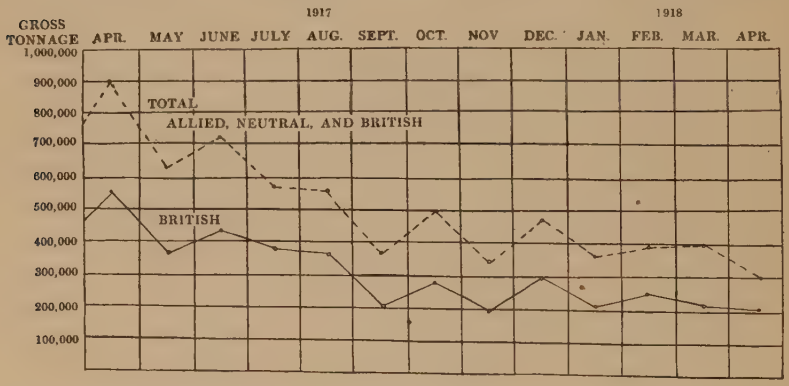
[1] Adapted from *World's Work* (July, 1918), p. 329.

come to be known as the "fabricated" ship—that is, a ship built to a standard plan, with every part cut and fitted before being put into place, whether at rolling mills many miles away from the shipyard or in shops directly connected with the yards. It happens that the New York Shipbuilding Corporation, which built the "Tuckahoe," has its own fabricating plant, although not of sufficient capacity to keep up a supply of standard parts for all the ships it has under construction at one time. At Hog Island, Port Newark, and most of the other new emergency shipyards, dependence is placed for standardized parts on steel mills situated elsewhere.

XLIII. The Race between Building and Sinking

1. A YEAR'S DECLINE IN SHIPPING LOSSES

The world's shipping suffered a net loss of 2,632,279 tons from the beginning of the war to April 1, 1918, the greater part of this having occurred since the beginning of the unrestricted submarine



warfare which brought America into the war. This loss is partly due to England's having increased her naval building at the expense of merchant tonnage. While naval construction must not be neglected, some building capacity can be turned back to merchant shipbuilding in case of extreme need. However, in April, 1918, Great Britain and the United States built 40,000 tons more shipping than was lost, and American construction is still rapidly increasing.

2. OUR GREAT SHIPBUILDING VICTORY[1]

In an Independence Day speech Secretary of the Navy Josephus Daniels said in part:

The gross tonnage of merchant ships built in the United States since the commencement of the European War is 2,722,563 tons, 1,736,664 gross tons of which have been built since the entry of the United States into the war. In addition to the tonnage thus built, 650,000 tons of German shipping have been taken over. This does not include the tonnage acquired in Dutch, Japanese, and other vessels. It will be of further interest to know that to-day there will be launched in the great shipyards of this country over 400,000 dead-weight tons. These figures are in addition to those previously given.

At San Francisco on July 4, Mr. Charles M. Schwab, director-general of the Emergency Fleet Corporation, said:

In 1915 all the shipyards in America turned out 215,602 dead-weight tons of shipping. The next year our output jumped to 520,847 tons. In 1917 the hot pace continued until we very nearly doubled the output of the previous year, completing a total of 901,223. I am confident now that if we pull together and every man stays on the job we will produce more than 3,000,000 dead-weight tons in 1918—the greatest output of any nation in the world in a single year.

3. RESULTS OF SHIPPING PROGRAM, JULY, 1918[2]

WASHINGTON, July 9.—Completion of twenty-three ships of 122,771 dead-weight tons in the first week of July made a total of 223 new vessels built under the direction of the Shipping Board. Their aggregate tonnage is 1,415,022. Of the new fleet, 218 vessels already are in actual service.

The July production is at the rate of more than 3,000,000 tons for the remainder of the year, and if this pace is maintained by the rapidly expanding shipyards the year's output will be close to 5,000,000 dead-weight tons.

The first week's total in July comprised fourteen requisitioned steel vessels and five contract steel vessels, with an aggregate tonnage of 108,271, and four wooden ships of 14,500 tons.

A total of 124 wooden ships has been launched to date. Twenty-four steel ships have been built on contract, the remainder being requisitioned vessels.

[1] Adapted from the *Literary Digest* (July 13, 1918), p. 11.

[2] Adapted from the *Chicago Herald Examiner*, July 10, 1918.

Chairman Hurley, after a visit to the White House to-day, announced that the Shipping Board had let contracts for ninety-two army transports.

Deliveries will be made before December 31, 1919. A number of the transports are building on the Pacific coast.

LONDON, July 9.—Speaking in the House of Commons to-day, Sir Leo Money, parliamentary secretary to the ministry of shipping, said the percentage of ships lost while homeward bound to the United Kingdom since January 1, 1918, was rather more than 1 per cent. The losses of food ships for the same period was less than 1.4 per cent.

The result of the convoy system, Sir Leo declared, continued to improve. Since January, 1917, when the system was put into effect, 42,000,000 gross tons had been convoyed to British and French ports with a loss up to June 29 of 1.29 per cent. This included loss by bad weather.

XLIV. How the Allies Control International Shipping[1]

In order to organize the economic resources and the national machinery of production of other friendly nations in co-ordination with our war-time nationalization of industry, food, railways, and capital, for effective concentration of these to war's purposes, our government has the War Trade Board, the Food and Fuel Administrations, the Foreign Exchange Control, and the Shipping Commission all working closely together in policy and method. The result seems to be a pretty well-centralized management of the big foreign activities connected with our economic mobilization.

Shipping men of extensive activities have the opportunity of seeing something of the way this works. The United States government, in co-operation with its Allies, now has at service pretty nearly every ship of any nation that sails the oceans. By an agreement with Norway, Holland, and Sweden over two million tons of their shipping have been directly chartered. We have agreed not to send some ships into the war zone. They are working over peaceful areas of the world for us. But through control of bunker-coal supplies, or by the right to refuse entrance and clearance to shipping in our own harbors, we are able to hold out inducements such as to make it possible for our consulates even in neutral countries to have practical first say over

[1] Adapted from an editorial in *The Americas*, March, 1918. Copyright by the National City Bank, New York.

available ships. Our War Trade Board would refuse license to ship coal except under agreement by which the Shipping Board controls even foreign supplies of it. A vessel in a foreign harbor whose services are desired for our government's purposes finds it impractical to refuse. A ship sailing from a United States port does so under license, and with its arrangements for return voyage all made for it by order of the Shipping Board, unless, indeed, the Board finds more urgent service after it has gone and cables new orders for the return. In addition to the employment of shipping for taking out and bringing in cargoes in accordance with the wide-stretching plan of international war-industry, we have obligated ourselves to supply certain European neutrals with food, and in recent weeks, on government order, wheat has been coming by ship-loads from Argentina for transshipment at some Atlantic port. It comes up in the neutral vessels, which cannot enter the war zone, and is transshipped to ships of the American, British, or French flags for crossing the Atlantic. The Food and Fuel Administrations are of course interested and in consultation. So are the organizations of the War Department whose business it is to keep war-production going. They probably use judgment, as week after week brings new conditions, whether they most need hides, or mahogany, or manganese, or wool, or nitrate, and in co-operation the different parts of the executive machinery work together to do the big business without interference of orders.

X

WAR FINANCE

Introduction

It is significant that war finance finds so tardy a consideration in a study of the economics of a world-war. In the old days preparedness for conflict largely depended upon the size of the war chest possessed by the king. With funds in hand he induced the service of mercenary legions and procured the necessary supplies in foreign as well as domestic markets. Under these circumstances money appeared the very essence of military strength. At the beginning of the present war this inherited view of the significance of money colored the thinking alike of statesman, financier, and layman. In those long-ago days of 1914, how ominous seemed that war chest of $30,000,000 at Spandau; and how encouraging the statement of Lloyd George that while England might raise the first £100,000,000 no more easily than Germany, it would be the last £100,000,000 that would win the war, and here England's financial superiority would manifest itself. With what confidence at the time of our entrance into the war did we not view our own financial strength: we could raise billions of revenue for the use of Uncle Sam and furnish in addition billions of "credit" to our distressed Allies. If the problems that have been under consideration in the preceding chapters of this volume have not already revealed to every student of war that money is not a basic factor—that it is merely a convenient, if not always a satisfactory, mechanism for accomplishing the fundamental work that needs to be performed—it is believed that the first division of this chapter will serve to indicate the true function of finance.

While the service performed by money is a secondary or intermediate one, it is none the less important that war be financed on sound principles; for ill-conceived financial methods may delay the mobilization of industry, impair the effectiveness of the entire economic organization, and cause the grossest injustice as between different classes of people. It is the purpose of Sections XLVI to L to present the leading views and opinions on the complicated questions here involved.

The readings show that conflicting views still prevail in responsible quarters on even the basic principles. The explanation of this is largely attributable to a confusion of financial with industrial problems. Thus the banker argues (selection XLVI, 1) that we must let the next generation pay the bills, while the economist (selection XLVI, 2) insists that under conditions where it is impossible to borrow from a neutral world, war costs can be met only by present sacrifices. It is argued on the one hand that all businesses must be kept prosperous in order that revenue may be abundant (selection L, 1) and on the other that the maintenance of prosperity in nonessential industries means a "treacherous" (albeit unwitting) assistance to the enemy (selection L, 2).

Another difference of opinion is owing to a difference in point of view. To some, war finance is viewed primarily with reference to principles of justice between income classes; to others the questions of equality of sacrifice and ability to pay, while not to be omitted from the reckoning, are nevertheless of subordinate importance as compared with a rapid mobilization of the nation's industries for the supreme and time-pressing task in hand. There appears to be, however, an increasing disposition to view the financial problem, not as a thing apart, but as an aspect of the one essential requirement—an effective mobilization of industry.

The successive Liberty Loan campaigns have resulted in intermittently sweeping the investment markets clean of funds for the uses of ordinary business. The result of this has been twofold: first to render more difficult the undesirable competition of nonessential industries against the government; and secondly to hamper essential businesses, whose continuance is of vital importance to the government. It was to render assistance to these necessary industries that the War Finance Corporation (Section LI) was formed. This is confessedly an experiment in finance. As yet, however, it appears to have been of little service. In many quarters, indeed, it is regarded as an agency of great potential danger. Its future history will be viewed with much interest by students of finance generally.

XLV. The Function of War Finance

1. POPULATION, WEALTH, INCOME, AND DEBTS OF BELLIGERENT COUNTRIES[1]

Country	Population	Wealth	Income	Borrowings
A. Entente Allies:				
United Kingdom	45,370,530	$80,000,000*	$10,500,000*	$19,000,000*
France	39,601,509	70,000,000	6,000,000	11,000,000
Russia	178,378,800	50,000,000	6,500,000	13,000,000
Italy	36,120,118	25,000,000	4,000,000	3,000,000
Belgium and Serbia	10,335,685	12,000,000	1,250,000	.....
Portugal and Rumania	13,465,994	7,000,000	600,000	.....
United States	102,826,309	220,000,000	38,000,000	.....
Entente nations	426,098,945	$464,000,000	$66,850,000	$46,000,000
B. Central Powers:				
Germany	64,925,993	$87,000,000	$10,500,000	$15,500,000
Austria-Hungary	49,458,421	40,000,000	5,500,000	7,000,000
Turkey and Bulgaria	25,611,416	7,000,000	1,000,000	1,130,000
Central nations	139,995,830	$134,000,000	$17,000,000	$23,630,000

* 000 omitted

2. CAN CAPITAL BE CONSCRIPTED?[2]

A cabled despatch from London, published in the *Evening Sun*, October 9, 1917, described a startling fiscal innovation which it was asserted was to be proposed by the government of Great Britain: "England," ran this cable, "is preparing to conscript capital—literally. . . . . The British Government to-day has practically decided to take the next step and levy directly upon capital. Barring a change of opinion in the meantime on the part of those responsible for the British financial policy, such a levy will be made soon after the war ends." Of course the report has aroused comment in England as well as here. Has it any foundation?

Even should the war be brought to a speedy end, it is said, Great Britain will be obliged to raise by taxation £500,000,000, or about $2,500,000,000, of which about one half will be required for the regular

[1] Table prepared by R. R. McElvare and Louis Gottlieb, of Columbia University. In *War Finance Primer*, National Bank of Commerce, New York, May, 1917.

[2] Adapted from *Business Digest*, December 12, 1917.

running expenses of the government and the other half to meet the interest on the war debt.

The plan seems to have been definitely formulated first by the Round Table—a group of the most intellectual and influential students of political and economic problems in the British Empire. The following excerpt from their organ, *The Round Table*, indicates the operation of the scheme:

> The difficulty of applying the method of a levy on capital is probably not so great as appears at first sight. Take, for instance, the case of the United Kingdom. The total capital wealth of the community may be estimated at about 24,000 millions sterling. To pay off a war debt of 3,000 millions sterling would therefore require a levy of one-eighth. Evidently this could not be raised in money, nor would it be necessary. Holders of war loans would pay their proportion in a simple way, by surrendering one-eighth of their scrip. Holders of other forms of property would be assessed for one-eighth of its value and be called on to acquire and to surrender to the state the same amount of War Loan scrip. To do this they would be obliged to realize a part of their property or to mortgage it. But there is no insuperable difficulty about that.

Another exponent of the conscription plan is Mr. Alfred G. Gardiner, editor of the *London Daily News*. He, like the Round Table, has decided that there is no other way open to the government except that of the conscription of an important part of the wealth or capital of the British rich and well-to-do. An idea of how he would go about the matter may be derived from the following passage in his article, "How to Pay for the War":

> The capital of the individuals of the nation has increased during the war from 16 thousand millions to 20 thousand millions. A 10 per cent levy on this would realize two thousand millions. It would extinguish debt to that amount, and reduce the interest on debt by 120 millions. In doing so it would nearly balance our budget and preserve our national solvency. The levy would be graduated—say, 5 per cent on fortunes of £1,000 to £20,000, 10 per cent of £20,000 to £50,000 up to 30 per cent on sums over a million . . . . . [The individual] would pay it in what ever form was convenient, in his stocks or his shares, his houses or his fields, in personalty or realty.

The partisans of the conscription program are described as "considerable groups of the working class on the one hand, and the socialistic or semi-socialistic improvers of society, on the other."

3. THE PLACE OF MONEY IN WAR FINANCE[1]

Perhaps the greatest surprise of the war to most people, even to those who had studied political economy, has been the enormous expenditure of money which a nation can incur, and the length of time which it can go on fighting without complete exhaustion. This should not have been in reality a surprise to anyone who had studied past history, for all experience shows that lack of "money" itself has never prevented a nation from continuing to fight, if it were determined to fight. The financial condition of Revolutionary France at the commencement of Napoleon's career was wretched in the extreme, yet France went on fighting for nearly twenty years after that. The Balkan States can hardly be said ever to have had great financial resources, and yet they fought, one after the other, two severe wars, and are now fighting a third still more severe and prolonged. The Boers in South Africa found no difficulty in fighting the British Empire for three years with practically no financial resources. The Mexicans recently managed to fight one another for a good many years in the same way. Lastly, the Southern states in your own Civil War fought for years a desperate and losing fight and were ultimately beaten to the ground, not so much by a lack of money, as by an actual lack of things to live on and fight with. In fact, all history proves, and this war proves to us over again, that if what the Germans call "the will to fight" exists lack of money will never stop a nation's fighting, provided it possesses or can obtain its absolutely minimum requirements of food, clothing, and munitions of war. It was Bismarck, I think, who said: "If you will give me a printing-press, I will find you the money." No doubt in finding the money required for an exhausting war a nation is driven to all sorts of desperate financial expedients which may very seriously affect its economic life, but in my opinion if a nation wants to continue fighting and can produce, or be induced to produce, the things that are absolutely necessary for life and warfare, the government will get hold of those things somehow. If it cannot get them in any other way, ultimately it will take them.

Therefore, though the mechanism of finance is exceedingly important, the vital thing both for a country itself and for its Allies, is that it should produce and so have available everything required for war, both for itself and for them. This may seem an elementary fact, but I lay stress on it because it is to my mind fundamental and the key

[1] By R. H. Brand (see p. 191). From an unpublished address before the American Bankers Association, September, 1917.

to the actions of a government at war. If the goods are not there or cannot be obtained from other countries in some way or other, no method of financing will avail at all. The all-important thing is therefore the annual production of the people for war, and the amount of that production which is left over after satisfying civil consumption and which is available for the war needs of the nation itself or of its Allies. In other words, the all-important thing is that the government should assist in the development of the maximum productive capacity of the nation, should direct that productive capacity into channels suitable for war, and should restrict entirely the consumption of nonessentials.

4. HOW THE GOVERNMENT USES THE MONEY[1]

Someone has said—I think it was Napoleon—that three things are necessary to wage a war successfully: money, more money, and still more money. There is a great deal of truth in this statement in ordinary wars, but as applied to the United States in the present conflict it is entirely misleading. Money is of paramount importance when a nation may buy its war supplies from abroad. England and France, for instance, before our entrance into the war, purchased with money vast quantities of war supplies from the United States. But it is impossible for us to use money, to any great extent, in buying goods from other nations, for the simple reason that the entire commercial world is now at war. With his money Uncle Sam can buy war supplies only from himself. There are of course a few exceptions to this, such as nitrates and rubber, but, substantially speaking, Uncle Sam must produce all the things which he is to use in the war. We, the people, turn funds into the Treasury and then Mr. McAdoo buys from us the supplies needed. The amount that he can buy is determined, in practice, by the amount of war supplies we have produced. Similarly, when we extend *credit* to our Allies we really say to them, We will furnish you with materials and supplies now and you may pay for them after the war is over. This point must be strongly emphasized; for many people fancy that furnishing credit to our Allies means merely sending them money, or perhaps some sort of draft or credit instrument. In the last analysis it always means that we send them goods, which they are to pay for at some future time.[2]

[1] An editorial. [2] Cf. Section XVII, p. 178.

5. RELATION OF BANK CREDIT TO WAR FINANCE[1]

There is something so plausible and insidious about the idea of financing the war by having the banks create new credit that the stern alternative of cutting down the use of credit for other purposes, and of curtailing all business but that which supports the war, has a poor chance of popular favor beside it.

What is the objection to a pyramid of credit, based upon government bonds and consisting, first, of individual credit, second, of member bank credit, and, finally, of reserve bank credit, all backed by the taxing power and the power to issue money? What can be better than such a combination as this? Why not finance the war in this way?

The answer is that this pyramid of credit cannot add one day's work to the industrial resources of the country. The entire program upon which the government is proposing to spend about $20,000,000,000 this year is all a matter of days' work. In times of peace the labor of the country is employed in private operations. The production consists in part of necessaries for immediate consumption, in part of luxuries, and in part of additions to the productive equipment. Now comes the war, and the government wants to take over a great portion of the working force and also asks the people to turn into the Treasury money enough to pay it. The rational way of complying with this request would seem to be, first, to cut out the production of luxuries or nonessentials; second, to cut down the additions to permanent improvements and equipment, restricting them to such only as will aid in carrying on the war and the essential industries; third, to keep enough people employed upon necessaries to support the country and the Army, and to put all the others on war work; fourth, to turn into the Treasury through taxes and loans the money which was previously paid to the people now released from private service to war work; since we are no longer expending it in the old way we can let the government have the use of it. The account balances. The country has simply diverted purchasing power from one class of work to another.

The other way of meeting the government's appeal for help is to say, as considerately as possible and with all possible assurance of patriotism, that we are sure that if allowed to continue our industries and occupations as usual we shall be able to do a great deal more for

[1] Adapted from the February (1918) circular of the National City Bank of New York.

the government than we possibly can if we are interfered with; therefore we offer to cooperate in setting up this pyramid of credit and challenge the world to show wherein this credit is defective or insufficient. We, as individuals, will give our notes to our bankers, the latter will lend us the credit with which to buy government bonds, and we will deposit the bonds with our notes as collateral security; the bankers can rediscount these notes at the Federal Reserve banks, and thus recoup themselves for the advances they have made; and, finally, the Federal Reserve banks, on the strength of the government bonds in their possession and by virtue of the power to issue money, can furnish the currency to pay all bills.

The object of this elaborate scheme—this pyramid of credit—is to supply the government with the means to go off and fight the war by itself, leaving us, the people, to go on with business as usual, undisturbed. The only weakness in the scheme is that it does not provide the government with army, navy, or equipment. These can be had only by taking men—labor—out of peace employments and placing them in the employ of the government. But when this is done, they go off our private pay-rolls and upon the government's pay-rolls, and if we will now pay into the Treasury what we formerly paid to them, or for the things they were making, there will be no need for a pyramid of credit.

XLVI. Can the Cost of the War Be Postponed?

1. THE BURDEN SHOULD BE SHIFTED TO THE FUTURE[1]

There are two main sources through which the financing of a war may be accomplished. One is the sale of securities—bonds and war savings stamps; the other, the collection of taxes. It is not simply a matter of getting the money or credit to pay war bills, but how to get it with the greatest assurance that we are adding to our fighting efficiency.

Experience teaches that it is not best to put an undue strain upon any business organization by using its working capital too closely. The better policy is to go into the money market and borrow new capital, if the business needs expanding, either by making loans at the

[1] By George M. Reynolds, from the *Chicago Tribune*, July 8, 1918.

Ed. Note.—Mr. Reynolds is president of the Continental and Commercial Bank of Chicago, and one of the best-known bankers in America.

bank or by selling securities. In this war enterprise the government, made up of all the people and all the industries in the country, represents the business organization, which, necessarily, has been expanding tremendously since we entered the war, and the problem is, How far can we go in using up the working capital of the people and the industries through the tax-levying power, which takes this working capital without leaving an equivalent against which loans might be secured?

If we pay taxes we have nothing left but the receipt; if we buy government bonds we have the obligation of the richest government on earth, an obligation that is good as collateral for the loan of new credit to replace that used in paying for the bonds. A man with a hundred, a thousand, or a hundred thousand dollars' worth of Liberty bonds feels the optimism born of the possession of property, whether he expects to use the bonds as collateral or not; and in this struggle we must not quench optimism, for it is back of the national morale which strengthens the Army and Navy.

We now have all the worries and hardships of the actual fighting, and we ought to avoid making them unduly burdensome. It is only just that we spread the financial problem over a number of years through obtaining a very liberal part of our war funds by the sale of bonds.

The administration, the Treasury, and the Congress are in possession of more of the facts than the rest of us and are better able to decide how far we may safely go in levying taxes. The principle to be observed, and no doubt the one they will endeavor to follow, is that taxes should not be so heavy as to curtail production.

2. THE BURDEN CANNOT BE POSTPONED[1]

The most basic fact which must be borne in mind in discussing this problem is that, for the people considered as a whole, *domestic borrowing* postpones no burden to the future. This really follows at once from the fact that only goods produced before or during the war or men living during the war can be used in conducting the conflict. We cannot shoot a shell to be made in 1930. The future is not here to bear burdens. Of course borrowing abroad does make it possible to postpone the burden of the home country.

[1] By E. Dana Durand. Adapted from "Taxation versus Bond Issues for Financing War," *Journal of Political Economy*, XXV (November, 1917), 883–916.

Ed. Note.—Mr. Durand, professor of political economy at the University of Minnesota, is now serving as expert in the Food Administration.

Borrowing at home, so far as a nation as a whole is concerned, is precisely similar to borrowing by an individual from himself. The reason the individual may gain by borrowing is because he borrows from another person. Would John Smith gain anything by writing a note to this effect: "Fifty years from date I and my heirs promise to pay to myself and my heirs $1,000 with interest at 6 per cent"? So far as the nation as a nation is concerned, a government bond issued at home is precisely similar to such a note in its effect.

This idea that the burden of war expenditures can be deferred to future generations is the supreme fallacy of finance. Many a business man whom we have every reason to consider sincere insists that he is willing to bear his full and just share of the war burdens, but adds that he can see no fairness in making the present generation bear the entire cost of the war, when the future generations are equally to profit by it. The future generations will, to be sure, have their burden from this war. They will have, in all probability, a somewhat depleted heritage of capital. But the future generations cannot repay to the present generation its outlay in the conduct of the war.

Conceive, for example, that the present generation should wholly pass away in forty years. If war bonds still remained unpaid, the next generation would have to bear taxes to pay interest and principal. But it would be paying to itself; it would have inherited the bonds as well as the taxes. What it paid would not be a burden on the people of that generation as such. It would not be repaying the present generation. The fact that generations gradually merge into one another does not change in the slightest the logic of the matter.

The same argument which applies to the future generations applies as well to the future years of the present generation. Professor Seligman, among others, is not disposed to favor long-term bonds, but urges short-time bonds in preference to taxes for a large part of the war expenditure. He says it would be easier for the people to pay for the war in ten years than in three, assuming that it is over in three years. As a matter of fact, for the people considered as a whole it would not be one whit easier. What the people as a whole receive as interest and principal repayment, that they must also pay. They defer no burden by the short-time bonds.

The controversy which is now raging between the advocates of taxation and the advocates of bond issues as a means of war financing results in part from lack of clear thinking and in part from the conflicting interests of individuals and classes. Confusion of thought is

probably the principal source of conflict. There is no economic subject as to which fallacies are more widespread and deep-seated.

We shall clarify our thought if with some precision we consider, first, the sources from which funds for war expenditures can be drawn. It should be observed that this inquiry comes substantially to the same thing as an inquiry regarding the sources from which the labor and the commodities for war uses can be obtained. What the government needs for war is not money but men and goods.

The only important source of funds for war expenditure consists of the surplus of current income—the excess of the income of the people above their other expenditures during the actual war period. This again is the same thing as saying that it is chiefly by the diversion of the current productive power of the nation to war channels that the war must be provided with men and supplies. The surplus of income represents the surplus of labor performed and commodities produced during the war which are not used for non-war purposes.

A surplus of current income available for war expenditure may be obtained in three ways: first, by an increase of production through speeding up; second, by saving in consumption; and third, by reducing the investment of new capital in non-war enterprises.

It has been estimated by the National City Bank that approximately $5,000,000,000 of the annual income of the country is in normal times devoted to new investments. It is a familiar fact that many persons of large income invest annually from half to nine-tenths of their income. Much as we should prefer not to check our industrial progress, we must remember that the very fate of all our past investments—indeed the fate of the nation itself—is at stake in the war, and that, purely from the material standpoint, it is good economy to spend what is necessary to save them, even if we temporarily forego industrial expansion. It is probable, in fact, that the largest one source of funds for the conduct of the war will have to be found in the diversion of the surplus income which ordinarily goes into investment.

Sources of war revenue other than the surplus of current national income are, for the most part, either not available for the United States or comparatively unimportant.

In the first place, it is evident that a war might be financed in part by the accumulation by the government of great quantities of munitions and other supplies during previous times of peace. That means preparedness. That our government has done very little in this direction is all too obvious.

In the second place, a war may be financed to some extent by borrowing abroad, by securing the surplus of the income of foreign countries on promise of repayment out of future income of the home country. It is obvious that the United States could not now, if it would, use this means of war finance; on the contrary, it is under the necessity of itself lending heavily to its Allies.

In the third place, some writers lay considerable stress on the thought that previous accumulations of private capital may furnish an important means of war finance. Professor Seligman, for example, in his recent brochure, *How to Finance the War*, suggests that there may be a large loan fund in existence, the accumulated profits of recent years which have not yet been invested, the use of which in payment of subscriptions to the loan involves simply a change of investment from private enterprise to government service.

This suggestion rests in considerable part on a confusion between individual economy and the economy of society as a whole. There is not at any one time a very large uninvested surplus of previous income. The individual may have a large amount, say, of last year's income deposited in a bank or invested in a temporary loan. He expects to withdraw the deposit or to collect the loan later and to make a more permanent investment. For him it is an available surplus. Meantime, however, the money is being used. It is represented by fixed or circulating capital in the hands of borrowers from the bank or from the individual capitalist. If the owner of the surplus income withdraws it from the bank or from the loan to buy government bonds or otherwise finance the war, the borrowers must, primarily from the surplus of their current income, repay what they have borrowed. Current income must, for the most part, foot the bill.

Again, Professor Henry C. Adams suggests that, while we cannot convert fixed capital into war supplies, it is possible to do so with circulating capital. Such a process, however, has very narrow limits. Circulating capital, in the last analysis, consists essentially of partly finished products, of stocks of finished consumable goods, and of finished capital goods of certain kinds not yet actually in productive use. The total of such products and goods in the country at any one time probably represents only a fraction of one year's income. Many of them are not adapted to war uses. Besides, only a comparatively small part of them can be dispensed with. They are, in the main, a part of the necessary means of conducting business. At the utmost,

it would scarcely be possible to finance more than part of the first year of a war through the use of previously accumulated circulating capital.

Another way, comparatively unimportant, in which previously accumulated capital may be made a source of war revenue is by allowing fixed capital to depreciate during the war. However, so far as such fixed capital is used in necessary production, a policy of this kind would soon prove disastrous. It would before long result in a reduction of current income.

The conclusion seems to be, therefore, that the surplus of current income must be the principal source of funds for the financing of the present war. The fundamental question is whether that surplus shall be obtained for government use by borrowing it or by taxation.

XLVII. Bonds or Taxes in What Proportion?

1. CONSCRIPTION OF INCOME[1]

Conscription of men should logically and equitably be accompanied by something in the nature of conscription of current income above that which is absolutely necessary. The obligation that each citizen furnish the state in time of war a large portion of his current income manifestly would impose no more oppressive burden than the obligation of military service. To be sure, the pressing necessity which leads to compulsory service is absent, since it is possible to finance a war by means of borrowing. Yet as a permanent war-finance policy borrowing has limitations which should exclude it from any comprehensive scheme of military preparedness. Modern wars are so enormously costly that a country which resorts to borrowing has not merely created for itself a difficult problem of taxation after the return of peace; it has also placed itself in a financial position which will make it exceedingly difficult to find the money to maintain and improve its military establishment in future years. Purely as a military measure, then, the conscription of income during a war should be adopted, unless such a policy would prove in any way a serious obstacle to the effective conduct of hostilities.

The injustice of treating those who provide the funds for war purposes more generously than those who risk life itself will not be

[1] By O. M. W. Sprague. Adapted from "The Conscription of Income," *Economic Journal* (March, 1917), pp. 5–6.

Ed. Note.—Mr. Sprague is professor of political economy at Harvard University.

questioned. Consider for a moment the contrast under the borrowing method of war finance between a soldier in receipt of an income of 500 pounds before a war and his neighbour who remains at home in continued receipt of a similar amount. The civilian reduces his expenditure in every possible way and subscribes a total of 800 pounds to a war loan. He is rewarded with a high rate of interest, to which his soldier neighbour must contribute his quota in higher taxes if he is fortunate enough to return from the front. The contrast becomes still greater if, as often happens, the income of the stay-at-home increases during the war and if he is able to secure a superior position. On the other hand, the soldier often finds it difficult to secure a position as good as that from which he was taken at the beginning of the war.

2. TAX POLICY IS MOST EQUITABLE[1]

While domestic bond issues postpone no burdens to the future as such, they do make possible a readjustment of the war outlay as between individuals and classes in the community. The really fundamental questions involved in the issue of taxation versus borrowing as a means of war finance are questions of social justice in the distribution of burdens. The war must be paid for now, but there may be a reassessment of expenses among us afterward. For instance, those who have paid more in the first place may be recouped by those who have paid less. We shall all have bought our chips, but we may still play to see who gets and who loses them.

If we could assure ourselves that the distribution of taxes after the war would be as just as the distribution of taxes during the war, there would be little choice between taxation and borrowing, were it not for the fact that, by inflating prices, bond issues cause injustice as between individuals and classes, a point which will be discussed later.

Most of what will be said with regard to the relative advantages of bonds and of taxation has particular reference to that part of war expenditures which is paid for, in the first instance, out of the surplus of the current income of the people. To the extent that previously accumulated capital can be and is to be taken for financing the war, it should be obtained by borrowing and not by taxation. It may be suggested, however, that if the advantages of taxation over borrowing

[1] By E. Dana Durand. Adapted from "Taxation versus Bond Issues for Financing the War," *Journal of Political Economy*, XXV (November, 1917), 893–902.

as a means of securing the surplus of current income should appear material, we ought seriously to question the wisdom of trying to induce men to contribute out of their capital by offering bonds, many of which of course will be bought at the same time by others out of income. At any rate, the policy of issuing bonds for this purpose may well be confined to the early stages of the war, during which, in any case, it is difficult to get the taxing machinery into shape to collect adequate funds.

The two fundamental questions in the issue of taxation versus borrowing are: In the first place, is the ultimate assessment of the burden of war expense on a highly progressive principle socially just? In the second place, is it feasible to collect by taxation any such proportions of the income of the several classes as it would be necessary to collect if no bonds were issued?

We certainly could not collect the entire cost of the war by taxation unless we levied taxes at highly progressive rates. Is this a fair distribution? Or would it be more fair that part of the moneys which the more well-to-do contributed should be later repaid to them by the less wealthy?

Most of us, business men and economists alike, believe in some measure of progression in the taxes for war purposes, whether levied during the war or after its close. The only difference among us is usually a matter of degree. If, as is pretty generally conceded, the principal measure of just distribution in taxation is the ability to pay, the degree of sacrifice involved in the payment, the rich man unquestionably may properly be called on to pay a materially larger proportion of his income as a tax than the poor man. To take from a man who has an income of $600 a tax of $60 cuts distinctly into his standard of living; it makes him forego what are virtual, if not absolute, necessities. To take from a man who has an income of $100,000 a tax of $10,000 involves little, if any, reduction in his standard of living; in all probability it means merely a reduction in the investments which he makes out of income—a slowing up in the rate of accumulation of his wealth and of increase in his income. The sacrifice of the poorer man is far greater than that of the richer.

The principle of equality of sacrifice justifies a very considerable measure of progression in tax rates, even for ordinary peace expenditures. For war expenditures the argument in favor of progression is still stronger, and a more rapid rate of progression is justifiable. For in war time the need of the nation is so great that it calls upon multitudes of its citizens for the greatest of all sacrifices, that of their

very lives. The welfare of the entire country, both for the present and for the future, is at stake. It is the duty of every citizen to share in war's burdens to his utmost. There is no definable limit to his obligation. The citizen who contributes even his entire income beyond what is necessary to subsistence itself does less than the citizen who contributes himself to the nation.

If conscription of men is justifiable, conscription of income is a logical corollary. This slogan has been attacked in some quarters on the ground that it assumes that only the poorer men will be conscripted to fight. It is urged, and rightly enough, that, as a matter of fact, the rich are equally subject to conscription, and indeed are quite as likely as the poor cheerfully to devote their lives to the nation's service. But has this criticism any real validity? The principle of conscription implies the justice of demanding from each citizen all that he can give, both of personal service and of money contribution, not the one as a substitute for the other. It is the duty of the poor man, if called upon, to give what he can spare from his income, and his life as well, and it is the duty of the rich man to do the same. We ask of each citizen to sacrifice his all, if need be, for his fellow-men and his posterity.

In discussing the social justice of a system of war financing we may properly consider, moreover, the ultimate effect upon the distribution of wealth and income among classes of the community. Many, if not most, of us believe that, quite regardless of the methods by which the more well-to-do have obtained their wealth or obtain their present incomes, the inequality in income as among the various classes is greater than is socially desirable. A tremendous gap lies between the penury of the millions and the affluence of the few. We should dislike to see any action of the government in connection with the war which would increase this disparity of income.

Now it is evident that, if the war is financed by bonds with a view afterward to providing for the debt service by taxes less highly progressive than would be necessary if the expenses were met by taxation during the war itself, the result would be ultimately to make the rich richer. Part, at least, of the saving which they undertook during the war in order to contribute to the government's needs would ultimately be repaid to them out of taxes levied upon the poorer classes. Their capital would thus become greater than it was before the war. After the taxes for repaying war bonds had ceased, the annual income of the rich bond-buyer would be actually greater than before the war. On the other hand, if during the war itself highly progressive taxes

were levied sufficient to meet the war expenditures, they would not serve, in any appreciable degree at least, permanently to lessen the inequality of income. They would not make the rich permanently poorer. This statement assumes that the taxes would be paid out of income, not out of capital—an assumption which requires but insignificant qualification. The sacrifice of all classes would be temporary —for the period of the war only. After the war expenditure ceased each class would be in the same relative position as before. Only during the war would the income of the rich be reduced more than that of the poor.

The tax policy, then, is more likely than the bond policy to mean the ultimate payment of war burdens in the manner which is socially equitable.

In one very minor respect perhaps the reassessment of war expenses after the war, made possible by the bond plan, may contribute to justice. There are at all times occurring changes in the incomes of individuals. Great fortunes disappear. The newly rich man of the future will of course be a beneficiary of the results of the war. It might be considered fair perhaps that out of his new riches he should contribute large taxes toward the bonds held by those who furnished funds during the war. However, these changes in the distribution of income are not so great as is sometimes supposed. Particularly if the war is financed by short-time bonds, the great bulk of the nation's income will, during the period of bond repayment, be distributed in substantially the same fashion as at present. The really important question regarding the just assessment of war burdens does not arise out of changes in the distribution of income, but out of the inequality in the distribution of income. The important thing is that there should be a fair apportionment of taxation as between the richer and the poorer classes. It is much to be feared that it would be less possible to secure such a fair apportionment if the war expenditures are reassessed after the war under the bond plan than if they are settled, once for all, under the policy of "pay as you go."

3. A CRITICISM OF HEAVY TAXATION[1]

An effort has been made to commit the United States to the policy of financing the war exclusively by taxation. It is seriously contended that, except for such funds as are immediately needed, the whole

[1] By Charles J. Bullock. Adapted from "Conscription of Income," *North American Review* (June, 1918), pp. 895–98.

Ed. Note.—Mr. Bullock is professor of economics at Harvard University.

expense should be met by increasing taxation to whatever extent may prove necessary. This is supposed to be entirely practicable and is claimed to be the only plan consistent with social justice.

The first argument in favor of this proposal is that, except in so far as a country can borrow money abroad and with it purchase supplies in other lands, the whole burden of war must in any event be met as it goes along, whether we resort to loans or to taxation. The real cost of war consists of the food, clothing, arms, munitions, and the like that must somehow be purchased and then consumed in military operations. This burden cannot be passed along to the next generation, but must be borne day by day as the war proceeds. Why not then finance it exclusively by taxes and avoid the delusion that by employing loans we are in fact passing any part of it on to our successors?

Such reasoning, so far as it goes, is correct. But it does not reckon with all the factors in the problem. It deals only with the real costs of war conceived in terms of material commodities and ignores the distinction between these real costs and the money costs into which they must be translated before we can reason in terms of actual life. We cannot take it for granted without careful investigation that in a complex state of society where business is transacted by an intricate system of exchange based upon the institutions of money and credit it is possible for a government by means of taxation to transfer abruptly, let us say, $5,000,000,000 from the pockets of taxpayers to the firing line without producing undesirable results and perhaps disaster. It is as if an engineer who wished to gather up a vast supply of water from distant sources and convey it to a reservoir in a great city should conclude that it was merely a matter of transferring so many gallons of water from one point to another and should give no thought to the sources from which the supply was drawn or to the apparatus through which it was distributed.

The question is one of the proper distribution of strain upon a complicated business mechanism which is now adjusted to work in certain ways and can be altered only gradually if we would avoid disaster. There are in the United States many people who have capital to lend and can readily arrange to have still more within a short time if the government resorts to loans. Borrowing from such persons will exert a certain strain upon our economic organization, because what the government borrows will not be available for investment in industry. There are certain other people who have large incomes of which a part would ordinarily be spent for personal

consumption and a part must be invested if industry is to go on. The smallest immediate strain would probably be occasioned by borrowing from the free capital of the business community. We can, however, without disturbance to industry, levy heavy taxes which will reach income that would otherwise be devoted to personal consumption, and we can steadily increase the amount of such taxation as time goes on. The most serious strain is that which would arise from "conscripting" income that would otherwise be devoted to the maintenance and development of industry; and this we should seek to minimize, even though we may not be able wholly to avoid it. The whole machine must be readjusted if a long war is to be financed, and we shall wreck it if we apply undue pressure at the wrong point, especially during the first year.

The second argument for exclusive reliance upon taxation is that public loans are likely to lead to inflation, which, of course, will increase the cost of living and the cost of conducting the war. When bonds are floated, credit is extended by banks to subscribers, and the securities, when issued, become collateral for loans. Thus public borrowing leads to an expansion of bank credit and tends to raise the general level of prices. That this may happen to some extent cannot be doubted; but it is to be remembered that such loans must presently be repaid, and that many borrowers will economize in expenditures in order to make such payment. To the extent that this occurs, private expenditures will be curtailed and the credits given by banks will be canceled without causing inflation. Furthermore it is not to be overlooked that, in view of the large demand for food and other commodities during the next year it is desirable that production shall be kept at a maximum and that higher prices will conduce to this result. The evil then is not so great as might be supposed, and it has important compensations.[1]

Since we are going to conscript many men for service at the front, where some of them must sacrifice their lives, it is argued that we must similarly conscript the wealth required for war expenditures rather than obtain it from loans attracted by the lure of interest. Conscription of income is declared to be the logical accompaniment of conscription of men, and loans are held to be contrary to the plainest dictates of justice.

If this were merely another way of stating, although with unnecessary circumlocution, that in time of war every citizen should hold his

[1] Ed. Note.—Cf. selection XLVIII below.

life and property at the disposal of the government, we could accept it as entirely true and also entirely useless as a principle of war finance. The sacrifice of life and the sacrifice of property are things essentially disparate, to which the idea of equality is wholly inapplicable. To men who lose their lives at the front we can offer nothing but grateful remembrance and suitable provision for those whom they leave behind. Upon those who stay at home we must impose the duty of providing the necessary supplies, but we can derive no rule of contribution from a comparison of the two kinds of sacrifice.

4. DESTRUCTION OF CAPITAL: A BUSINESS VIEW[1]

There are sound reasons why an important share of the expenses of the war should be raised by taxation during the war. Most lines of business are under extraordinary stimulus, profits are larger than usual, wages are generally higher, and the employment of the people is very complete. Therefore the country can afford to pay taxes now better perhaps than it will be able to in the years following the war, when it may be suffering from reaction. Moreover the industrial capacity and labor supply of the country are occupied with war business to such an extent that it is impossible to go ahead with constructive work in other lines as usual. The current income of the country must of necessity be given over largely to the government, either through loans or taxation, to enable it to carry on the war, and the proportion between loans and taxation should not be governed by a desire either to favor or to penalize wealth, but by the probable effects upon the general welfare, through the results upon industry, employment, and the ability of the country to meet conditions after the war. No taxation conceivably possible after the war will be as important to the masses of the people as the possible difference between a state of general industrial activity, with full employment to all the people, and a state of industrial depression such as this country experienced in the winter of 1914–15. Everybody will be able to pay his share of the taxes if the industries are busy and still have a better living than he will have if the industries are depressed.

The catch phrases which are used show the same want of comprehension of the fundamental relations of society which is responsible for most of the ill-feeling and friction in the industrial world. The agitation is all based upon the assumption that private wealth is

[1] Adapted from the monthly bulletin of the National City Bank of New York on *Economic Conditions, Governmental Finance*, etc., June, 1917.

devoted to the owners, and that if it is taken away from them, even though destroyed, nobody else is a loser. The whole idea is that the proposed taxation will reach hidden hoards, or possibly curtail the luxurious living of the rich, with apparently no appreciation of the fact that it will fall upon the industrial fund, the capital available for the support of industry.

Is the public interested in the industrial fund? Is it interested in the production of things for the public market? This is an opportune time to ask if it is interested in the supply and price of things of common consumption. Is the public interested in the development and improvement of industry, in the multiplication of power plants, and the enlargement of industrial capacity and output? Is it interested in the facilities for transportation? If it is agreed that the public is interested in these things then the proposal to withdraw capital in great amounts from these purposes should be considered with regard to its effect upon the public interests instead of being treated as though the individual title-holders were alone concerned.

If this reasoning is correct the community should beware how it seizes for current use upon the capital which is certainly destined for the industrial fund. To a very great extent it must be done, but it is not to be done in the spirit of eager confiscation with which in some quarters it is advocated at the present time. It would be folly to seize it upon the theory that the public is really acquiring anything at the expense of the rich owner, for under no conceivable circumstances will the taxation encroach upon the portion of his income which is devoted to his own support. Indeed the common argument for the seizing of large incomes is that it will involve no sacrifice to the owners. This is true; the sacrifice is from a fund destined to public use, and at the expense of society as a whole in the future.

5. THE CRUX OF THE PROBLEM IS LARGE PRODUCTION[1]

The truth is that the government is now taking, either through loans or taxation, practically the whole of the savings margin of the community, and that the only way of increasing the amount it can get is through increasing either the total product of industry or the

[1] Adapted from "Washington Notes," *Journal of Political Economy*, XXVI (June, 1918), 666–67.

ED. NOTE.—This reading apparently represents the view of the Treasury officials after a year's experience in the administration of war finance.

amount of it that is saved. Some increases in productiveness may be possible, although they must of course contend with the steady drain of labor into the fighting forces. Savings can undoubtedly be largely increased and must be if greater outlay on war is to be provided for. The raising of funds through any other means would imply nothing more than inflation of credit and the raising of prices, processes neither of which would be of the slightest advantage to the government and would be of immense disadvantage and injury to the public. The problem of government financing is thus not, as was erroneously supposed by a large number of economists at the beginning of war, a choice between loans and taxation as methods of getting government revenue, but a problem of encouraging the development of a surplus of wealth that can be made available by either means for government purposes. There is grave danger that in the new taxation plans this point might be lost sight of and a mere theoretical preference for taxation be allowed to counterbalance a need for larger income.

At the opening of the war there was a distinct tendency in many quarters to regard the effect of loans and taxation as distinctly different from one another. It is now apparently quite generally admitted that this is a distinction without a difference, and that the whole question between loans and taxation depends upon whether the funds furnished in either case are likely to be the result of saving or of bank borrowing. Taxes paid by a contributor from the proceeds of loans obtained by him would be an agency in "inflation," whereas a government bond sold to an investor who purchased it from funds saved out of his current income would not be. This modified view of the case largely does away with the cruder theories expressed early in the war and based upon the view that taxation practically always tended to keep down prices, while loans in a similar way tended to advance them. Experience is showing that there is no basis for any such view, and the prevailing view of the general problem is being modified accordingly, as just indicated.

6. WAR FINANCE AND WAR PRODUCTION[1]

The argument of the preceding selection that the great problem of war finance is not one of proportions between bonds and taxes, but rather one of encouraging the development of a surplus of wealth that can be made available for government uses by either means is somewhat beside the point. The problem is not one of increasing the

[1] An editorial.

production of *total* wealth so that the government can collect abundance of revenue; the problem is rather to increase the production of the *right forms* of wealth in order that the army may have the materials for fighting. We might easily derive an abundance of revenue from the production of luxuries and nonessentials generally; indeed the lesson of the past year indicates that we could thus get a superabundance of revenue. But this would not give us what we need. Exclusive of loans to our Allies, the government planned to spend during the fiscal year ending June 30, 1918, $12,316,000,000. In fact, the government had spent in the seven months from June 30, 1917, to January 31, 1918, only about $3,150,000,000. That is, in seven-twelfths of the year the government had been able to spend only three-twelfths of what it planned to spend. With coffers filled to overflowing the government could not buy the supplies needed, for the simple reason that not sufficient energy had been devoted to the production of war supplies. We could, moreover, have raised much greater sums if necessary.

This is of more than academic interest. During the periods of Liberty Loan campaigns the investment field was swept clear of funds for business uses. There were essential lines of business that were hampered by a lack of funds, merely because the government had mortgaged their use in advance of its requirements. Large excess revenue in the hands of the government, moreover, leads to public extravagance. Many attacks have been made against the government in England on this score during the present war. It is well known also that a considerable percentage of those employed in Washington are receiving much higher compensation than they ever received in civilian occupations. With all too many of them this enlarged earning power results in extravagant consumption. The same phenomenon also applies to "rich war laborers." This extravagance results in diverting productive power to nonessential uses.

The Treasury is estimating now that it can raise $24,000,000,000 for the year 1918–19, because this figure represents the total of the savings of the American people and American corporations. It represents, however, merely monetary savings; and there is no assurance that the production of war supplies will equal $24,000,000,000. Until we understand that monetary savings are not tantamount to production of war supplies we will make no rapid progress in the science of war finance. It is quite possible that this coming year we shall again raise more funds than necessary, with resultant hampering

of essential industry. The Treasury Department appears to be thinking still in terms of money rather than in terms of industrial production. The transformation of monetary savings into the production of war supplies requires much time, for it necessitates the readjustment of a highly complex industrial mechanism from peace production to war production.

There is of course the consideration to be reckoned with that heavy taxation and bond issues—heavier than is immediately necessary—result in more quickly forcing a retrenchment in consumption of luxuries and thus hasten the necessary readjustment of industry. This is true, however, only in so far as the taxation falls on consumption; it is not true when it falls mainly on the income of corporations. The consideration therefore holds for the *kinds* of taxation but not for the *total* amount. It holds for the placing of bonds and thrift stamps among the rank and file but not for bond subscriptions of corporations. It holds for taxation of consumption but not for taxation of excess profits in war manufacture. In the main the necessary readjustments are best and first effected by more direct means, by priorities in the matter of raw materials and transportation, and by plant conversion at the request of the government.[1] The essential requirement of war finance, so far as total revenue is concerned, is to ascertain the amount of war supplies that will be procurable and then adjust the income to the outgo. This is what is sometimes known as making a government budget. Our financial policy unfortunately has thus far had regard mainly to monetary revenue; it should be co-ordinated with the production of war supplies.

XLVIII. War Finance and Currency Inflation

1. THE MEANING OF INFLATION[2]

The continued high prices and the apparent tendency of prices to advance to still higher levels have brought about a more active discussion of the theory of prices and conditions tending to raise them than has existed at any time within perhaps twenty-five years. Foremost in this discussion is the question whether "inflation" is or is not the result of the operation of the Federal Reserve System, and if so in precisely what way. Much of the current discussion has apparently been based upon vague or indefinite ideas of the meaning

[1] See selections XXVII, 6 and 7.

[2] Adapted from "Washington Notes," *Journal of Political Economy*, XXVI (June, 1918), 667.

of "inflation," but there is now considerable evidence that a more general consensus of opinion and agreement as to definitions is in sight.

"Inflation," in the sense in which the term is now being used by the more careful writers on the subject, is taken to signify the increase of bank credits not represented by any immediate addition to current wealth. Thus, for example, if the government borrows by an issue of bonds, such bonds being taken by the banks and payment for them made in the form of bank credit which is at once transferred to individuals who have furnished labor or supplies, it is evident that there has been a net addition to the purchasing power of the community not represented by any corresponding addition to wealth, whether of a salable or available form or otherwise. Here there is an "inflation," or exaggeration of, or addition to, the actual purchasing power of the community as compared or contrasted with the amount of goods in existence. From this point of view the measure of "inflation" is afforded by the total new holdings of bonds in banks which have become the basis for credits on the books of such banks, used or applied to the purchase of goods and services. Particularly is this true in those cases where the purchasing power so used takes a form which is available as "reserve" against other credits to be granted by the banks. Thus, for example, if the banks which purchased bonds in the illustration already given at once rediscount their own notes secured or protected by these bonds, at Federal Reserve banks, they thereby obtain a credit on the books of Federal Reserve banks which will sustain, theoretically at least, several times its own amount in the form of credits on the books of the banks which have been granted the rediscount. This means that the credit so granted may serve several times as a medium of purchasing power employed in gaining control of goods and services. In so far as paper secured by government bonds has been discounted on a semi-permanent or renewal basis, the Federal Reserve System may thus be regarded as serving as a means of "inflation."

2. INFLATION THROUGH BORROWING ON BONDS[1]

The essential difference between raising money from the public by taxation and raising it by the issuance of bonds is the resulting inflation. Inflation is a word that is much used but not always

[1] By F. A. Delano. Adapted from "Fundamental Principles of Financing the War," *Economic World* (June 22, 1918), p. 883.

Ed. Note.—Mr. Delano is a member of the Federal Reserve Board.

understood. In its simpler and most readily comprehended meaning it is that form of inflation of the currency which was common in our Civil War, when the government, instead of printing its promises to pay in the form of investment bonds, printed them in the form of *currency notes*. Under that method of inflation a government wishing to buy a million dollars' worth of produce, or to pay a million dollars in wages, would simply print a million dollars of its own "promises to pay," and these promises to pay in the form of *currency* would thereafter pass from hand to hand as money. The extent to which this sort of inflation may go without wrecking the financial structure of a nation depends entirely upon the wealth of the nation and the confidence which the public or other nations have in its ability to keep its promises. The usual symptoms of such methods of inflation are the disappearance of metallic money and the general advance in the prices of commodities. In this terrific war most of the European nations have resorted to this or similar methods of inflation; and because the operations of various governments have been united through banking transactions and by reason of interdependence and close international relationship, even those nations entirely unconnected with the war have felt the effects of inflation. As a result there has been in effect in the last three and one-half years a world-inflation the like of which has never before occurred.

To illustrate: Prior to our entry into the war, when the European nations were buying heavily in the United States, they paid largely in gold for what they bought, and as a result about a billion dollars in gold coin came to this country in the period of two and one-half years. The reason the European nations were able to send us their gold was that they printed paper money for their own use, releasing gold for us. But that gold inflation in this country is one explanation of the general advance in prices of all commodities, although undoubtedly it is not the only explanation; for it must be freely admitted that prices have been affected, first, by scarcity, occasioned by increased demand from Europe for many articles produced by us; second, by reason of the fact that increases in taxes and wages of labor have entered into the cost of production and sale of all articles and account for a share of the increased prices of commodities.

It is doubtful if we in our country could have avoided inflation, no matter how hard we had stuck to the plan of higher taxation or the "pay-as-you-go" policy, but we may as well frankly admit that while our financial policy has been conservative the great increase in

our currency issues has contributed to the general inflation. True, we have not issued currency or government promises to pay in the form of circulating notes, but we have issued bonds and we have permitted—and indeed could not have forbidden—the use of these bonds as collateral for bank credit. Thus, while the government has not paid for "goods and services" with its own circulating notes, it has issued its promises to pay in the form of bonds and it has permitted these bonds to be hypothecated for currency; and thus, through our banking system, it has created a machinery under which the owner of government bonds might secure bank credit with which he might pay by check or in currency for what he bought. We have thus far in this country been able to hold down the issuance of currency by maintaining a high gold reserve against it, and there is no national currency that is on a stronger basis; but to deny that the issuance of government bonds to raise funds to pay for goods and services results in inflation would exhibit an unwillingness to look the facts in the face.

While the effects of inflation are manifestly bad, it would be unfair not to admit that inflation has some good effects. In so far as it increases the prices of commodities generally, it results in compulsory economies (except where wages or money incomes increase in like proportion) and in this sense operates as a sort of tax on consumption. Hence, if it be true, as we have contended, that economy is necessary in war times, it might be urged that a heavy consumption tax was a most desirable method of bringing about enforced economies. A just answer to that suggestion seems to be that such a form of consumption tax falls with great severity upon citizens in general because it adds to the cost of the necessities of life; upon the wage-earner it falls heavily unless and until he is able to get his wages advanced in proportion to the amount of the inflation; and upon those dependent on moderate fixed incomes or fixed salaries it is an unduly heavy burden. It affects, of course, all corporations or individuals engaged in manufacturing and other industrial enterprises, but it may in many cases be passed on by them to the consumer in the shape of increased prices. For those corporations which, by reason of contract or law, are required to accept a fixed compensation, it is very burdensome. Perhaps the most serious indictment against the results of inflation is the fact that it dislocates all the delicate inter-relations between wages, compensation, payment for services, prices of commodities, etc.; and, although brought about by the operations of the govern-

ment itself, its effect is to raise prices against the government, thereby increasing the necessity for still further taxation or borrowing. In other words, it establishes what may be termed a *vicious cycle*, in that it first raises prices and by so doing creates the necessity of raising more money, and so still further raises prices again.

Our conclusions must therefore be:

First, that the government needs rigid economy of all its citizens to win the war; that it requires it, not only because it needs money to command and pay for goods and services, but because every self-denial will release some good or some service which the government can use to good advantage. Second, it is clear, not only that taxation is the best way for citizens to support their government, but that taxes intelligently applied will do much to produce the very savings of which we have been speaking. Lastly, taxation and the resultant savings are the only means to mitigate the perils and pitfalls of inflation.

3. THE EVILS OF INFLATION[1]

The danger of the loan policy is that, by deluding itself with a notion that it is putting the burden onto the future, it will, through resort to fatuous and easy expedients, put the burden both on the present and on the future. This will happen if the loan policy, failing to induce a commensurate increase in the savings fund of the nation, degenerates, through the abuse of banking credit, into inflation—raising prices against the great body of consumers as well as against the government, thus needlessly augmenting the public debt and increasing the cost of living just as taxes would. The policy of financing war by loans, therefore, will be but a fragile and deceptive and costly support unless every dollar obtained by the government is matched by a dollar of spending power relinquished by the community—in other words, will fail and develop into inflation unless the dollars which are subscribed to the bonds of the government are real dollars, the result of real savings and of real retrenchment. The danger to be feared in undertaking to finance our war by credit is that sophistry and financial legerdemain may lead us to attempt to carry the operation through as an operation in banking finance instead of as an operation in saving and investment. The doctrine is already current in the country, with the sanction of some leading bankers,

[1] By A. C. Miller. Adapted from "War Finance and the Federal Reserve Banks," in *Financial Mobilization for War*, pp. 145–49.

that our war cannot be financed except by credit expansion running to the limits of inflation. Being dealers in banking credit, they naturally take the view that the expansion of credit in question will properly have to be an inflation of banking credit; for this is the new and most recent form of inflation which the gigantic war in Europe has been bringing to the front as a device in war finance.

Inflation as an expedient of public finance has long been practiced, although it has never had the sanction and approval of those whose business it has been to lay down canons of finance rather than to engage in the practice of finance. The record of our own great wars and the records of the great wars of other nations in modern times show pretty uniformly that timidity in facing the serious realities of war finance has usually developed a situation from which escape was finally sought through the desperate and costly expedient of government currency inflation. Such was our disastrous experience in the Civil War, when resort was had to the greenback currency, which was nothing but a device of inflationism, and some $500,000,000 was thereby added to the cost of the war—which might have been avoided had the government's financial operation been maintained on a strong and healthy basis—to say nothing of the demoralization wrought in business and the hardships and iniquities inflicted upon the great body of defenseless workingmen and consumers. Clear and specific as the teachings of that experience are to those who can learn from history, it will remain for this war to demonstrate whether or not the lesson has been fully taken to heart. Inflation still has seductive potentialities for the pundits of paper finance. Even if we do not avowedly repeat the costly mistakes of our Civil War by ventures in the field of government currency inflation, we may yet reach a similar result and land the community in a similar plight through the more subtle and less vulgar process of banking inflation.

The same process, only in a vastly intensified degree, has been going on in the belligerent countries of Europe and has given rise repeatedly to the gravest expressions of solicitude by those who are engaged in looking through the tissues of paper finance to the inexorable economic facts. All of the belligerent countries of Europe, in one degree or another, have undertaken to finance the war by bank borrowing, with inflation results that, for the most of them, make a tragic record of hardship for the masses and needless augmentations of the nations' debts, and will leave behind, at the close of the war and for the next generation, a heritage of unspeakable financial confusion.

For let it not for a moment be overlooked that inflation, in its effects, amounts to conscriptive taxation of the masses. It is, indeed, one of the worst and the most unequal forms of taxation, because it taxes men, not upon what they have or earn, but upon what they need or consume. The only difference for the masses between this kind of disguised and concealed taxation and taxes which are levied and collected openly is that in the case of the latter the government gets the revenue, while in the former case it borrows it, and those to whom it is eventually repaid are not those, for the most part, who have been mulcted for it. Inflation therefore produces a situation akin to double taxation in that the great mass of the consuming public is hard hit by the rise of prices induced by the degenerated borrowing policy and later has to be taxed in order to produce the revenue requisite to sustain the interest charge on the debt contracted and to repay the principal. The active business and speculative classes can usually take care of themselves in the midst of the confusion produced by inflation and recoup themselves for their increasing outlays. Indeed inflation frequently makes for an artificial condition of business prosperity. That is why war times are frequently spoken of in terms of enthusiasm by the class of business adventurers. But it is a prosperity that is dear-bought and at the expense of the great body of plain-living people. It would be a monstrous wrong if in financing our present war we should pursue methods that would land us in a sea of inflation in which the great body of the American people, who are called upon to contribute the blood of their sons to the war, were made the victims of a careless or iniquitous financial policy.

XLIX. Taxation Policy

1. THE FIRST YEAR OF WAR TAXATION[1]

1. THE INCOME TAX

The change in rates imposed by the War Revenue Act of October 3, 1917, as compared with the act of September 8, 1916, is of a threefold character: an increase of the normal tax, a lowering of the exemption, and a rise in the scale of progression. A supplementary normal tax

[1] By Edwin R. A. Seligman. Adapted from "The War Revenue Act," *Political Science Quarterly*, XXXIII (March, 1918), 17 ff. Copyright by the editors of the *Political Science Quarterly*, 1918.

Ed. Note.—Mr. Seligman is professor of political economy at Columbia University.

of 2 per cent is imposed, bringing the total to 4 per cent. The law furthermore provides for a reform that had been widely urged by those who considered the exemption of $3,000–$4,000 entirely too high. Accordingly, in the case of the supplementary normal tax the exemption is reduced to $1,000 for unmarried and $2,000 for married persons. The law also provides for an additional exemption of $200 for each child under eighteen years of age or incapable of self-support because of mental or physical defect.

In order to counterbalance this reduction, which will bring into the toils of the law millions of new taxpayers, the rates on the higher incomes are sharply increased. The original law, it will be remembered, had provided for a so-called additional tax (popularly called the surtax, or sometimes the supertax) on all incomes over $20,000, ranging from 1 to 8 per cent on the highest amounts. The law of 1916, as we have noted, increased the graduated scale so as to run from 1 to 13 per cent. The new law reduces to $5,000 the amount at which graduation begins and provides an entirely different scale, ranging from 1 to 50 per cent, for the supplementary additional tax. The result is that the maximum rate is now 67 per cent, that is, 2 per cent supplementary normal tax, 13 per cent old additional tax, and 50 per cent new additional tax.

This is the highwater mark thus far reached in the history of taxation. Never before in the annals of civilization has an attempt been made to take as much as two-thirds of a man's income by taxation. In comparing our present income tax with the British, moreover, it is to be noted that our rates are much higher on the larger incomes and much smaller on the lower and moderate incomes. The American scale is an eloquent testimony to the fact, not only that large fortunes are far more numerous here than abroad, but also that there is greater appreciation of the democratic principles of fiscal justice. For the overwhelming trend of modern opinion is clearly in the direction of applying to excessive fortunes the principle of faculty or ability to pay. It still remains to be seen, however, whether the new law, with its exceedingly high rates, will turn out to be as workable administratively and as productive fiscally as a somewhat lower scale would have been.

The second change in the law is the virtual abandonment of the stoppage-at-source method of collection. It will be remembered that the two leading types of income tax that had developed during the last generation were the so-called lump-sum method of Prussia and the

scheduled method of Great Britain. The Prussian system, which rested finally upon accurate official assessment, depended for its success upon an incorruptible civil service and the fear instilled into the average taxpayer of making false returns. Great Britain had long since abandoned the scheme and had substituted the plan of imposing the responsibility of the tax upon the person who paid the income rather than upon the recipient. As between the unchecked lump-sum and the stoppage-at-source method it is clear that under American conditions the latter was preferable. At the close, however, of the discussion in 1913, an alternative plan was suggested, to which the present writer gave the name of information-at-source, designed to achieve the substantial purposes of the collection-at-source method without its discomforts and complications. This alteration has now been finally adopted in essence. The law makes the tax collectible from the recipient of the income, but imposes upon the payers of income the obligation to give full information of the amount and conditions of payment. Information is required from corporations as to dividend payments, from brokers as to details of transactions, and, in general, from all persons making payment to any other person of any "fixed or determinable gains, profits, and income over $800." Only two exceptions are permitted. Withholding at the source is retained for the original normal tax in the case of income accruing to non-resident aliens and of interest on tax-free bonds. The latter exception was inserted as a concession to bondholders who, relying upon the promise of the corporations to assume the tax, had paid so much more for the bonds. It is to be regretted, however, that the law fails to include the provision, found in the British statute, which prohibits for the future the inclusion of such tax-free covenants in corporate bonds.

On the fundamental question of what constitutes income the new law does not take any fresh stand. This still remains a difficulty, which, however, not only is shared by many other income-tax laws, but is traceable to an inadequate analysis. The distinction between capital and income has received far less scientific attention than it deserves. It may be said that there are at least three different conceptions of income found in economic literature: the one emphasizes the idea of regularity or recurrence; the second accentuates the idea of product or return from an enduring source; the third, or net-profit theory, lays stress on the surplus of what comes in over what goes out. It is impossible here to discuss the widely divergent practical

consequences of these theories. It may be said, however, that until economists have decided which of the three is correct, the interpretation of the law is bound to create endless trouble. Some of the chief difficulties of the interpretation are still associated with the question of stock dividends and depreciation in the market value of securities.

Up to this point we have discussed the individual income tax. The law, however, provides, as before, also for a corporate income tax. In addition to the existing normal tax of 2 per cent, a supplementary tax of 4 per cent is imposed upon the income of every corporation, joint-stock company or association, or insurance company, but not including partnerships. The result is that corporations will hereafter pay a tax of 6 per cent on their income. In computing the tax, however, all dividends received by one corporation from another taxable corporation are deductible—an important concession to holding companies but a concession limited to the supplementary tax. The limitations on the deduction for interest and taxes referred to above in the case of individuals are applicable also to corporations, as is the provision permitting the crediting to income of the excess profits levied in the same year.

Corporations, however, are subject to a further tax of 10 per cent on the amount of profits remaining undistributed six months after the end of the year. Income actually invested in business or in federal bonds is exempted from this additional tax; but if it transpires that profits retained for employment in the business are not so employed or are not reasonably required therein, they shall be subject to a tax of 15 per cent. It may be conjectured that these provisions will lead to a speedy distribution of all corporate profits that should properly go to the stockholders.

In any fair estimate of the present law five defects may be noted, some of them survivals, some of them additions.

The first weakness is the failure to introduce differentiation between earned and unearned income. An attempt was made to persuade Congress to adopt this distinction, which, as is well known, was initiated in Great Britain almost a decade ago. The reason advanced for the refusal—the fear of further complicating the tax—is far from convincing. Simplicity gained at the expense of equity is not to be admired. The situation is in fact aggravated by the extension of the excess-profits tax to professional incomes, as a result of which earned incomes, instead of being taxed less, will actually be

taxed more than unearned incomes. This is of course a travesty of justice.

The second defect is that returns, instead of being demanded from everyone, are required only from the non-exempt classes, that is, from those whose income exceeds $1,000–$2,000 or $3,000–$4,000 respectively. This, coupled with the failure to compel a return of income from government tax-free bonds, will prevent the collection of valuable information as to the total social income and its distribution. A return, including the entire income, should be required, as is almost uniformly the case elsewhere, from every citizen.

Third, the provision as to the calculation of losses and gains is still inequitable. On any one of the three different theories of income referred to above, our present practice of counting certain gains as income and of refusing to allow for corresponding losses is not only indefensible, but sure to create gross inequalities.

In the fourth place, the treatment accorded to dividends is highly questionable. Dividends must indeed be reported by individuals and, although not subject to the ordinary normal tax, are liable to both the supplementary normal tax and the additional taxes. A new section, however, provides that dividends are taxable at the rates prescribed for the years in which the corporate profits are accumulated. This is unjust because the dividends ought to be considered income when received, irrespective of when the profits were earned. If the war should last several years and be attended by an increase of war taxes, it is likely that many wealthy stockholders will escape by the fact of the corporate profits having been originally earned in the period before the high taxes were imposed. Moreover the law will probably be so complicated as not to be easy of enforcement. For the rate of the tax will depend upon the amount of total income in any one year, and the identical amount of dividend may form an entirely different proportion of that income from year to year. It will be increasingly difficult, therefore, to administer the provision. In the meantime great confusion will ensue.

The final defect is that no machinery has yet been devised to check the returns from individuals engaged in business or occupations. In the case of large corporations and partnerships, as well as individual incomes from securities, the system of information-at-source, together with the observance of modern accounting rules, will in all probability ensure fair accuracy in the returns. But where neither of these safeguards is applicable, a large loophole is left open. Where the rates

of taxation are as high as at present, the dangers of evasion are multiplied; and evasion means not only loss of revenue but inequality. Much has been done elsewhere to institute checks designed to diminish this danger. While some of the statements advanced in and out of Congress as to the widespread evasions in the present law are clearly exaggerated, there is still room for decided improvement in administration.

II. THE EXCESS-PROFITS TAX

Although the income tax, both old and new, is designed to provide about the same revenue as the excess-profits tax, the latter is the novel part of the law. What is its significance?

The first point to be emphasized is that it is a business tax. The criteria that may be employed in classifying taxes are manifold. For the purpose, however, of explaining this new impost it will suffice to observe that taxes on wealth are susceptible of a threefold division. The tax may be on either property or income, on either individuals or corporations, on either persons or things. It is this last distinction which is of consequence here—the distinction which the lawyers make between taxes *in personam* and *in rem*. Among the "things" on which taxes may be imposed are land, capital, and business. The excess-profits tax is one on the business, irrespective of the person who conducts it. It is like the real estate tax in New York, assessed on the land without regard to the owner. The objection, therefore, is not valid that because the tax is imposed on profits it constitutes double taxation in superimposing one income tax upon another. This is the same confusion of thought which has led some writers to object to the inclusion of a corporate income tax in a law which endeavors to reach the entire income of the individual. The corporate income tax, like the excess-profits tax, is a tax on the business, not a tax on the individual; a tax on a thing, not on a person.

In the second place, the excess-profits tax is not a war-profits tax, if by this term we mean a tax imposed upon the additional profits resulting from the war. This constitutes its chief difference from the war-profits taxes levied in other countries.

The almost simultaneous institution of the war-profits taxes abroad is easy of comprehension. Never before in the history of the world have such gigantic sums been expended by belligerents or have such colossal gains been made by private individuals in belligerent and neutral countries alike. It was a natural feeling that no private

enterprise should be permitted to make inordinate gains out of the misery of humanity, and that the community should be entitled to a great part of the profits for which no individual enterprise is really responsible. The consequence was that the government everywhere put in a claim to a large share of these profits due to the war. The proportion has risen in some countries to 80 or 90 per cent, and the war profits have in general been defined as the excess of profits during the war over those during a pre-war period.

The reason which induced Congress to modify this principle was that not a few of our largest business enterprises had been making immense profits in the pre-war period, and that, inasmuch as their profits, both past and present, were scarcely being touched by the corporate income tax, these enterprises would virtually be exempt, while their more unfortunate competitors, who had done relatively poorly during the pre-war period, would be heavily burdened. The decision was therefore reached to levy the tax, not on war profits as such, but on excess profits in general. Although the tax is called the "war excess-profits tax," the term really means the tax on excess profits levied during the war, just as the terms "war excise taxes" or "war income tax" mean the respective taxes levied during the war.

The significant fact, however, is that nothing is said about the limitation of the tax to the period of the war. In the war-profits taxes abroad the taxes cease automatically with the end of the war, for where there is no war there can be no war profits. It is entirely possible, however, for our tax to continue after the war, just as it is possible that fiscal exigencies may compel the continuance, in whole or in part, of our war income tax or of our war excises. It will be seen, therefore, that we have here, ready to hand, a potential source of the future income which will be so sorely needed hereafter, and for which European statesmen and publicists have been dimly groping.

When, however, we come to consider the precise way in which this new business tax has been worked out, we find that it is open to serious criticism. In all the European laws the taxes are not on war excess profits but on excess war profits; that is, on the excess of war profits over peace profits. Since, however, our plan is to tax excessive profits in general rather than the excess over a pre-war standard, the criterion had to be lodged elsewhere than in pre-war profits. Unfortunately the criterion of normal profits is declared to be a certain percentage of the capital employed, the pre-war period being utilized only incidentally in ascertaining this normal percentage. That is to

say, in computing excess profits the law takes the excess over a so-called deduction or normal amount, consisting of a fixed sum ($3,000 for domestic corporations, or $6,000 for partnerships, citizens or residents), together with an amount equal to the percentage of the invested capital represented by the average annual income during the pre-war period, provided that this percentage shall in no case be less than 7 nor more than 9 per cent of the capital. The pre-war period is held to be the period from 1911 to 1914. In case the business was not in existence in those years, the deduction is fixed at 8 per cent instead of the 7–9 per cent. And in case there was no income or a very low income during the pre-war period, the criterion is the percentage of capital earned by a similar or representative business.

From this base line of normal profits are computed the excess profits, the tax rising progressively with the excess, being fixed at 20 per cent on the excess profits up to 15 per cent; 35 per cent on the excess from 15 to 20 per cent; 35 per cent on the excess from 20 to 25 per cent; 45 per cent on the excess from 25 to 33 per cent; and 60 per cent on the excess profits over 33 per cent.

It is obvious that the important point here lies in the computation of capital, for with one exception income is defined precisely alike in the excess-profits and the income-tax laws. The greater the amount of the "invested capital" as compared with a given income, the smaller will be the percentage and the tax. What constitutes invested capital, however, is so elusive as to be virtually impossible of precise computation. Not only will there be gross inequality between businesses which enjoy the same income but which are variously capitalized, thus putting extra taxation on small and conservatively capitalized concerns, but all manner of opportunity will be afforded for evasion of the law. The effort made to define capital in the law is unavailing. Invested capital is defined as actual cash paid in, the actual cash value of tangible property, and the paid-in or earned surplus employed in the business. Patents and copyrights are included up to the par value of the stock paid therefor, and the same rule is declared applicable to the good-will, trade-marks, and franchises or other intangible property, provided that if purchased before 1917 the amount is limited to 20 per cent of the capital. The inadequacy of these provisions is manifest.

It has been contended, in defense of the law, that it is on the whole immaterial whether the criterion be sought in income or in capital; for capital, we are told, is nothing but capitalized income. In reality,

however, capital is not capitalized income; capital is the capitalization, not only of present income, but of anticipated future income, which is a very different thing. If, as frequently happens, the anticipated future income does not materialize, there is a vital difference between a tax on capital and a tax on income. The objection to the law still remains, as before, that the choice of capital not only constitutes a clumsy attempt to reach taxable ability, but introduces a gross inequality in principle and a deplorable uncertainty in administration. While something may no doubt be done to clear up the ambiguities and to remove some crass inequities, enough will remain to deprive the measure of a claim to scientific or practical validity.

The most serious objection to the law, however, has yet to be mentioned. Even assuming that the above difficulties were removed, that the capital could be accurately estimated, and that it varied in amount proportionally with the income—even on these unlikely assumptions the tax would still be defective.

This is due to the criterion chosen for the basis of the graduated scale. Something can be said for a graduated tax on income; something can even be said for a graduated tax on capital; but it is difficult to say anything in defense of a tax which is graduated on the varying percentage which income bears to capital. To penalize enterprise and ingenuity in a way that is not accomplished by a tax on either capital or income—this is the unique distinction of the law. For in the first place, while it is true that excess profits are sometimes the result, in part at least, of the social environment, they are not infrequently to be ascribed to individual ability and inventiveness. While it is entirely proper that a share of the profits should go to the community, it is not at all clear that the tax should be graduated according to the degree of inventiveness displayed. But there is a still more important consideration. Almost all large businesses have grown from humble beginnings, and it is precisely in these humble beginnings that the percentage of the profits to the capital invested is apt to be the greatest. The criterion selected, therefore, is the one best calculated to repress industry, to check enterprise in its very inception, and to confer artificial advantages on large and well-established concerns. Nothing could be devised which would more effectively run counter to the long-established policy of the American government toward the maintenance of competition.

What then is the alternative? If the excess-profits tax has come to stay, as is probably the case, a slight change in the criterion

employed would accomplish the desired result. What is needed is that the excess-profits tax should become a progressive income tax. It is significant that this is actually done already where the capital criterion is impossible. The law provides that in every business without any capital, or with only a nominal capital, a tax of 8 per cent should be paid on the income, in addition to the income tax. This provision has indeed the awkward result of making earned income pay at a higher rate than unearned income, but it is none the less significant. The individual income tax is levied on a highly progressive scale, but the corporate income tax is proportional. All of the desirable ends sought to be achieved by the excess-profits tax would be reached by converting the corporate income tax into a progressive tax. Graduation would then be applicable in both cases, the only difference being that while the test of ability to pay would be sought for the individuals primarily in the sacrifice imposed, it would be found for the business primarily in the privilege enjoyed.

2. THE TREASURY PROGRAM FOR 1918–19[1]

In an announcement dated June 12 the Secretary of the Treasury has made public what is practically the program of the Treasury financing for the coming year. The new plan is practically an extension of the system adopted in February last whereby large quantities of Treasury certificates are offered to the banks at short intervals in amounts roughly proportionate to their resources. The banks are expected to purchase and hold these certificates pending the floating of an issue of long-term bonds whose proceeds are then used to fund the maturing certificates. The expenditures of the government, as nearly as can be estimated, will require the sale of certificates of indebtedness up to the first of November, 1918, aggregating approximately $6,000,000,000. This would involve the issue every two weeks of about $750,000,000 of certificates substantially similar in character to those issued prior to the Third Liberty Loan, except that they will have various maturities not exceeding four months. For the months of July and August that program will be followed as nearly as possible. The first issue of the certificates will be dated June 25, will mature October 25 with interest at 4½ per cent, and similar issues, it is expected, will be made on Tuesday of every other week following June 25.

[1] Adapted from "Washington Notes," *Journal of Political Economy*, XXVI (July, 1918), 744–48.

It is contemplated, however, that at a convenient and favorable period during the summer an offering will be made to the general public directly and through the banks of an amount yet to be determined, perhaps $2,000,000,000 of certificates of suitable maturities for use by taxpayers in paying next year's taxes, viz., taxes payable June, 1919, levied under existing and pending legislation. To the extent that certificates of that character are sold, substantially an equivalent reduction in the amount of the regular fortnightly sale of certificates issued in anticipation of the next Liberty Loan will be effected. Early information of the estimated requirements of the Treasury is being conveyed to all the banks of the country, and, through them, to those who expect to make payment of taxes in 1919. They will be asked to make arrangements promptly and of such a character that no delay will be experienced in the sale and distribution of Treasury certificates of both issues. The Federal Reserve banks will advise all national and state banks in their respective districts of the amount of certificates which they are expected to take from time to time in pursuance of this program—a sum which can be figured roughly to equal 2½ per cent of gross resources of each bank and trust company for every period of two weeks, or a total of 5 per cent monthly. It will be remembered that in the February program the amount which the banks were asked to take was substantially equal to 2 per cent of the gross resources for each period of two weeks, or a total of 4 per cent monthly.

The total number of bi-weekly offerings of certificates to be made to the banks will somewhat depend upon the amount to be raised from the public through the sale of tax certificates as described above. The proposal thus placed before the banks is practically equivalent to a doubling of the financing of the past spring and winter, and its eventual success will clearly depend upon the ability to float a proportionately enlarged Liberty Loan, which will be the fourth of the series. Assuming that this next Liberty Loan is placed at about the time the first issue of the certificates matures, the loan would evidently be offered toward the end of September. Could the country at that time successfully purchase and absorb, say, six billions of Liberty bonds? The placing of the new financing upon practically this scale is clearly necessary if the present financial and military program is to be carried out. Possibly the most serious doubt in this connection is furnished by the question whether it is in fact feasible and practicable to spend the amount of money which is to be raised without

merely increasing prices of commodities to a corresponding degree and thus really defeating or at least not advancing the essential object of the plan.

NEW TAXATION

It is of course recognized that the whole success of a financial program upon so great a scale must depend upon the laying of a satisfactory foundation for it by means of new taxation. Up to a very recent date it had been assumed that no such new taxes would be levied during the current year, and the Secretary of the Treasury had expressed this belief in his *Annual Report*. The increasing necessities of the goverment and the growing demands of the allied countries established a basis for suggesting the alteration of this tentative understanding, and such suggestions have been confirmed by the growing conviction that the present income and excess-profits law is unsatisfactory and would be unworkable were it not for the unusual co-operation of the community under the stress of war conditions. This situation led to the outspoken declaration of the President in his address to Congress on May 27, when he took definite action in favor of a new measure of taxation, whose necessity has now been reluctantly accepted by Congress.

In a letter to the chairman of the Ways and Means Committee dated June 5, the Secretary of the Treasury furnishes some detailed data designed to substantiate the belief that immediate action is requisite. The statistical tabulations submitted show that in March, 1917, the expenditures were in round figures $100,000,000. In May, 1918, they were $1,508,195,000. If there should be no further increase during the coming fiscal year, the cash expenditures upon the May basis would be more than $18,000,000,000. If, as seems inevitable, the increase in expenditures should continue at the rate of $100,000,000 per month for the next six months, or until December, 1918, and if thereafter the monthly expenditures should remain stationary until June 30, 1919, the Treasury would have to finance expenditures aggregating $24,000,000,000 during the fiscal year ending June 30, 1919; or, to put it in another way, if the average monthly expenditure should exceed that for the month of May, 1918, by $33\frac{1}{3}$ per cent, it will be necessary to provide $24,000,000,000 in the fiscal year 1919.

In the fiscal year ending June 30, 1918, cash disbursements will amount to between $12,500,000,000 and $13,000,000,000. Of this

amount about one-third will have been raised by taxes and two-thirds by loans, all of which will be represented by long-time obligations, that is, bonds of the First, Second, and Third Liberty Loans and War Savings Certificates. On the strength of this showing it would thus appear that with taxes producing their present yield it would be necessary to raise, by borrowing, during the fiscal year 1919 about $20,000,000,000. The danger or impossibility of such an attempt is obvious and hence the development of a plan to raise at least $8,000,000,000 from taxation. In order to get the amount required the Secretary of the Treasury makes the following suggestions:

1. That one-third of the cash expenditure to be made during the fiscal year ending June 30, 1919, be provided by taxation. According to estimates this would involve raising $8,000,000,000 through taxation.

2. That a real war-profits tax at a high rate be levied upon all war profits. This tax should be superimposed upon the existing excess-profits tax in such a way that the taxpayer should be required to pay whichever tax is the greater. The existing excess-profits tax should be amended in certain important particulars so as to remove inequalities.

3. That there should be a substantial increase in the amount of normal income tax upon so-called *un*earned incomes. Under existing law *earned* incomes above certain exemptions are taxed 4 per cent as an income tax and 8 per cent as an excess-profits tax, making a total of 12 per cent, while *un*earned incomes, derived from securities, etc., are taxed only 4 per cent. The 8 per cent tax should be recognized as an income tax and the rate of 12 per cent (4 per cent normal and 8 per cent excess profits) should be retained in respect to *earned* incomes, while a higher rate than 12 per cent should be imposed on *un*earned incomes.

4. That heavy taxation be imposed upon all luxuries.

The program thus outlined, taken in conjunction with the immense borrowing plan, will come close to doubling the burdens imposed upon the community during the past year and again raises the question whether there is a savings margin in the country large enough to provide means for carrying any such load. Up to date the highest estimate of produced wealth over consumption, i.e., savings, has been $18,000,000,000. If $24,000,000,000 is to be obtained, there must therefore be either an increased production or a decreased consumption amounting to $6,000,000,000. That the amount required can be obtained by either method is naturally gravely to be doubted, and the alternative—that of merely bidding up prices through urgent demand for goods—presents itself as a danger.

3. CRITICISM OF PROGRAM FOR 1918–19[1]

Speaking generally, the financial program adopted by Congress on entering the war was a sound program. The lesson taught by the financial management of the war of 1812 and that of 1861 seems to have been learned. Exclusive reliance for the needed revenue was placed neither on loans nor on taxes; nor was the amount to be raised by new taxes limited to the interest on new issues of bonds. The rule followed seems to have been to secure as much as possible by taxation and to rely for the remainder upon the use of public credit. This is a sound rule. Other things being equal, there is no question of the superiority of taxes over loans as a means of securing capital, especially if that capital is destined to go up in smoke. The student of finance can be readily persuaded that $1 should be collected by taxation for each $2 secured by loans.

It is not enough, however, that an adequate amount of money be secured through taxes. The task of the financier is more exacting. He must exercise great care as to the kinds of taxes used and the rates imposed. The money contributed by taxes must be secured this year in such a way that an equal amount, or perhaps an added amount, can be secured the next year, the year following, and so on, until the exigency has passed. The fund from which taxes are taken should, like the widow's cruse of oil, be ever full. This is the kernel of the problem of war financiering.

In the main, also, the so-called "war taxes," levied by the acts of September 8, 1916, and October 3, 1917, may be approved, when regarded from the point of view of social justice or of economic analysis. In one respect, the principle on which they rest is new to the American people. They are a frank recognition of the fact that a part of the product of every business is a co-operative or social product, and that the government, which stands for the collective interests of all, should supply its exigency needs by taking back from each what the co-operative work of all has produced, but which the market has failed to distribute. There is no other defense of the excess-profits or the income taxes.

Provided the extraordinary demand of the war can be satisfied by such portion of the social product as can be soaked up by income taxation, the argument for the exclusive use of such taxes is at least

[1] By Henry C. Adams, in the *Chicago Tribune*, June 8, 1918.

Ed. Note.—Mr. Adams is professor of taxation and finance at the University of Michigan.

plausible. Raise the rates and make the taxes already in operation more prolific. This seems to be the chief feature of Secretary McAdoo's plan of getting the $8,000,000,000 from taxes for the next fiscal year. Is it a good plan?

There are two reasons why the taxes named above should not be made the exclusive basis of a system of war taxes. In the first place it should be noted that the success of the surplus-profits and differential income taxes during the first year of the war is no proof that they will serve equally well the second year or the third year. The business conditions and bookkeeping results of the years 1916 and 1917 were peculiar. It by no means follows that 1918, 1919, and 1920 will show the same results. Consider, for example, the so-called national savings.

For the years 1900 to 1910, according to King's estimate based on census figures, the average annual savings of the United States were $2,000,000,000. For the half-decade prior to 1915, it is said annual savings ranged around $5,000,000,000. In 1916, the corporate surplus and increment of values, called savings, are estimated at $16,000,000,000, and for 1917, $18,000,000,000. No great stress is laid on these figures as figures. They may be wide of the mark, but the trend which they show is typical of the computations on which reliance was placed for the levy of the income taxes of 1916 and 1917, and on which Secretary McAdoo now relies for obtaining $8,000,000,000 by improving the income-tax machinery.

Whence come these enormous profits? Do they stand for a real product? Or are they mere figures for which there is no corresponding material fact, at least to their full amount? If the savings given above measure an actual industrial attainment of the American business world, there is no need of broadening the basis of taxation in order to collect sufficient funds to meet ever-increasing expenditures; if, on the other hand, these figures are the work of incomplete analysis, a system of taxation built on them must, sooner or later, encounter serious difficulties.

It is only necessary to place by the side of these figures, which are said to measure the savings of the years 1916 and 1917, the increase in wholesale prices of the same years to disclose the nature of the incomplete analysis on which they rest. The movement in wholesale prices during the eight years from 1910 to 1917, inclusive, is given in the following table, taken from an article on "Inflation," recently published by Dr. Kemerer. The table shows that for the six years 1910

to 1916 wholesale prices in the United States were practically stable; in 1916 they show an advance of twenty-five points, and in 1917 of seventy-eight points, above the base. From the outbreak of the war in 1914 to 1917 prices rose 75 per cent, but this rise was confined to the two years 1916 and 1917.

INDEX NUMBERS OF WHOLESALE PRICES

Year	Index Number
1910	99
1911	97
1912	101
1913	192
1914	101
1915	101
1916	125
1917	178

It is certainly significant that the two years that show abnormal profits are the same years that show abnormal prices. I cannot go into this analysis to show how much of the "increased saving" of the years named was due to increased industrial activity and how much to inflation of wholesale prices. My conclusion is tenable, whatever the ratio disclosed. This parallel between the movement in savings and the movement in prices cannot be a coincidence. Some portion—and a considerable portion—of the $18,000,000,000 surplus of 1917 is due to the 75 per cent increase in prices and will disappear when increased prices have reacted fully on costs of production. To that extent the productivity of the surplus-earnings and differential income taxes, as shown in 1917, will disappear.

4. EXCESS PROFITS AND INDUSTRIAL MOBILIZATION[1]

When imposed early in a war, excess-profits taxes that do not leave open an inducement to transfer from peace to war business will be suicidal, so long as we rely upon profit margins as the method of industrial shifting. Will the point at which the tax begins make allowance for increased risks, or will it be at a flat rate, making no discrimination between standardized peace business and uncertain war manufacture? If the latter, the business manager who contemplates a shift from peace to war manufacture will usually not be willing to make the change. This is one of the points that our friends who

[1] An editorial.

urge taxation "to the bone," especially on war business, quite generally overlook.

The development of a scientific system of taxation in time of war must take as its point of departure the industrial requirements of the situation; and ordinary peace-time principles of finance may have to assume a position of secondary importance. Thoroughgoing reorganization of industry is even more imperative than distributing the burdens of taxation among the various classes of society according to their relative abilities to pay at the moment. For the ability of any or all to pay ultimately may be dependent upon immediate industrial mobilization. Taxation may be made an effective instrument for promoting rapid industrial reorganization or it may be made an agency that works at cross-purposes with the paramount requirements of the situation. In this connection it should be observed that the argument for conscription of income does not start with this point of view. It runs rather in terms of equality of sacrifice. The real corollary of conscription of men for military purposes is not conscription of income but conscription of men and of capital for the industrial army. Conscription of the use of capital, not of capital itself, is a significant distinction.

5. ARGUMENT FOR TAXES ON LUXURIES[1]

The tax on "retail sales" is recommended, not only to raise additional revenue, but for the equally important purpose of discouraging wasteful consumption and unnecessary production. It would be superfluous at this stage of the war to dwell upon the fact that waste and extravagance are akin to treason. We pay lip homage to this truth, but we neglect its practice. We are not yet cutting our personal budgets sufficiently to make the excess of national production over national consumption equal to the needs of the government.

The retail-sales tax distinctly labels the taxed article as luxurious and serves notice that the government's ban is upon it. The specific tax on luxuries, however, is paid by the producer or dealer and is likely to reach the consumer concealed in the form of an increased price. At this time it is necessary, not only to tax extravagance, but to make the tax known and felt by the taxpayer. It is for this reason

[1] Adapted from a Memorandum of Possible Sources of Revenue suggested by the Treasury Department and submitted to the Ways and Means Committee, 1918.

that despite some administrative objections a tax upon retail sales is so distinctly worth while.

Assuming the correctness of this general attitude, it seems to follow that the retail-sales tax to be effective must be heavy. The really needy consumer is amply protected by exempting from the tax altogether those classes of articles which the poor actually buy or need to buy. Other articles must be taxed vigorously if the tax is not to be interpreted as legitimatizing extravagance. Place a 20 per cent tax on nonessentials and the consumer will pause before buying. Impose only a 10 per cent tax and he will frequently satisfy his conscience by purchasing the article and paying the tax. This aspect of the question seems vital. Whether 20 per cent is high enough to discourage extravagance is a question; that 10 per cent is too low, under existing conditions admits of little question.

It is highly important that the consumption of unnecessary things be given up, in order that both capital and labor may be liberated for the production of those things which the government needs for the prosecution of the war.

For the same reason, it is important that the usual consumption of even necessary things should be curtailed. An industrial condition adapted to peace demands must give place to an industrial condition adapted to war demands before the business activities of the nation can be said to be mobilized for war. Processions and brass bands cannot accomplish this result, nor an appeal to patriotism, nor the wielding of the big stick. There is one way, and one way only, of attaining this result, and that is through the prices of things that people buy.

If, now, the government could secure a portion of the revenue it needs by taxes that work their way into prices in such a manner as to direct the consumption of the people, and, consequently, their production, along proper lines, the by-product of such a financial policy would be even more significant than its direct product. Indeed, without this by-product no financial program can succeed. A sound financial policy alone will not obtain the needed funds, nor obtain them in such a way that future revenues may be taken from the same source; a sound financial policy must, in addition to such results, exert a positive influence for the accomplishment of that industrial readjustment which the advent of a great war makes necessary. The federal income-tax laws have no such influence, and for this reason are to be condemned as exclusive war taxes.

The general conclusion of the foregoing comments may be summarized as follows:

The initial burden of a war is the industrial transition from a condition of peace to a condition of war. Every act of government that touches business, and especially taxation, should be shaped to the accomplishment of that transition. The excess-profits and differential income taxes are over the top of the problem, and, consequently, are incompetent as war taxes. The new war taxes to be passed by the present congress ought to be written from a more comprehensive point of view. They ought to be regarded as a part of a systematic program of war financiering.

L. The Thrift Problem, or The Consumer's Dilemma

1. THE APPEAL TO SPEND

A. SAMPLE ADVERTISEMENTS[1]

Most newspapers in Massachusetts have opposed the idea of devoting a maximum amount of the national resources to winning the war. On their advertising pages they have urged people to buy the very things the government asks us not to buy; in their news columns they have suppressed the message of the national government urging thrift; and editorially they have not supported the government policy. The following quotations are from Boston papers of April 6 to May 4, the period of the Third Liberty Loan drive.

Among various advertisements are: "There must be increased activity in all business." "Spend all you can afford . . . . dress as well as you can—don't show yourself a miser. . . . . War is not won by killing business of any kind." Or again, "If people are going to judge by clothes (and they're going to whether or not you happen to like it)—why not wear clothes that will make them judge you a World-Beater instead of a Gutter-Pup! . . . . Wearing poor clothes is just as foolish as," etc. "Clothes are going to cost a whole lot more! You don't need a rabbit's foot . . . . to get in out of the rain! All you need is good old COMMON SENSE. Common sense enough to buy the clothes you're going to need while present values are still obtainable. . . . . Good clothes are not only going to be high—they're going to be WELL NIGH UNOBTAINABLE!"

[1] By Sinclair Kennedy. Adapted from an open letter, entitled "Why Massachusetts Lags," dated June 4, 1918.

Ed. Note.—Sinclair Kennedy is the author of Pan Angles.

A typical article states: "Economy in clothes is not pursued to a great extent for several reasons. One is that we all realize that to some extent trade must run in its usual channels. We must not cut down too stringently on any sort of spending, for fear we may create a sort of panic and bring hardship for some classes of workers. . . . . But last year's skirts! Dear me, they are quite impossible, most of them."

An editorial remarks, "Economies of dress are at maximum in savage communities, but the 'simple life' is obtained there at the cost of civilization itself."

Compare these with the appeal of the government distributed by the National War Savings Committee: "Are you wearing out your old things? By so doing you are saving labor and material that should be employed for war work. . . . . To dress or live extravagantly in war times is not only unpatriotic, it is bad form. . . . . Remember that laying in a supply for the future may be good housekeeping in peace times—in war times it is unpatriotic, hoarding, and hinders the government. Don't question whether you can afford it, but whether the country can afford to let you have it."

The day after the Third Liberty Loan drive terminated a Massachusetts paper printed an article concerning automobiles, warning its readers not to believe all the stories about the automobile industry, "particularly dispatches from Washington." It stated that it was patriotic for motorists to use up gasolene in their cars and said, "If you are thinking of buying a car, go ahead and do it. There will be fuel enough and tires enough to guarantee you a great many miles of enjoyable riding."

Compare this with the government appeal: "Do you save gasolene, rubber, and skilled labor by cutting out all unnecessary use of motor cars? Gasolene is one of the most important war supplies. Every gallon counts. Rubber is also in demand. Chauffeurs are needed on government work."

B. ARE YOUR ECONOMICS ON STRAIGHT?[1]

Are you one of those who preach that our duty at this time is to skimp and save and deny ourselves all but the bare necessities of life?

Are you for the "sackcloth and ashes" stuff—or do you realize that it is just because we are the most luxury-loving people on earth that we are also the richest and therefore have been called upon to

[1] By E. Le Roy Pelletier. Adapted from "Are Your Economics On Straight?" *Leslie's Weekly* (May 11, 1918), p. 659. Copyright by E. Le Roy Pelletier, 1918.

finance and to fight to a finish this most "extravagant" of all wars? Listen—No man ever made a fortune by saving. No community ever got rich by limiting its people to the bare necessities of life. All surplus wealth is derived from the manufacture and sale of luxuries. Limit yourself to the use of necessities only and you'll stop the production of all but necessities. For all progress, all civilization, all wealth, beyond the bare needs of the moment are the direct result of the production and sale of luxuries.

We hear a lot nowadays to the effect that we Americans are a wasteful and extravagant people. Yet when the war had been precipitated by the most "frugal" people on earth—except the more primitive races of savages—we, the "extravagant" nation, were asked to finance and to prosecute the war to a successful finish. And we expect to do this from the surplus left from our extravagance. Yes! And it is because of our very "extravagance" that we have the money to do it. Being the most luxury-loving, luxury-enjoying, luxury-demanding people on earth, our surplus is the greater. Civilization, culture, progress, impose on those who crave them both mental and physical effort. Stop the effort—and you retrograde to the status of the Hottentot.

China is wonderfully rich in natural resources—yet her people are deplorably poor. If China has the resources, why are not the Chinese wealthy? Why, the Chinese have worn the same styles of clothing for a thousand years and have subsisted on one diet—plain rice! The Japs tried the same forms of "frugality" for centuries and just managed to subsist. When they began to copy American "extravagance" they became a world-power.

Oatmeal put up in a box with a fancy name and sold for four times its value as oatmeal is a familiar form of American "extravagance." But a box of it would resurrect India. And if you could persuade the Chinese to eat "compôte de riz" instead of just rice, there'd be hope for them, too! From the wealth created by their "extravagance" they would become rich.

There's small profit in the production and sale of raw materials. One—or at most a few—share in that profit. Save the crude ore if you will—deny yourself the luxury of a watch or a motor car—but what will you do with the ore then? Where derive the wherewithal for even the necessities of life?

This idea that in order to finance a war we must designate as "nonessentials" those industries from which our greatest help, both material and financial, come, shows a deplorable lack of knowledge of

the very fundamentals of economic principles. Buy the piano you want; buy the diamond necklace; buy the automobile—and thereby keep American workmen busy and enable them to do their part, which they are only too eager to do, in helping finance the war.

It's all wrong—this idea that in order to finance the war we must deprive ourselves of all but the bare necessities of life. Rank sophistry those phrases "an old suit of clothes is a badge of honor," and "a dollar paid for a ball for a boy to play with is a traitor dollar." But this preaching that we must don sackcloth, cover ourselves with ashes, bow down in grief, deny ourselves the luxuries to which we have been accustomed—and thereby stop their manufacture and sale—that's contrary to all laws of economics. Let's get down to first principles—let's correct our angle on economics, for we are missing the mark, most of us. The facts are camouflaged and we are shooting at a dummy.

C. INDIVIDUAL VERSUS NATIONAL WELFARE[1]

On August 5, 1914, the day after war was declared, I increased our advertising space. From that day I have been buying all the advertising space available. I would do more advertising today if I could get the space. We are limited only by the limitations of the newspapers. We are taking right now every inch they will give us and at rates that would make us in the states turn somersaults and fall over backwards. I am paying at the rate of $1 per agate line for display space right now. I will take more space if they will give it to me—and at that rate. I probably will pay more before the war is over. But I will take all they will give.

The first four months of this year have been the biggest four months in our history. This growth has come because we have forced it. At the beginning of this year we were the sixteenth largest house of the kind in the world. At the end of this year we will be the sixth. Within two years after the new store building is completed we will be first.

A big factor—a very big factor—in this record has been and will continue to be newspaper advertising. We never could have broken through these traditions over here without it. We had to use all

[1] By Harry Gordon Selfridge. Statement given to the London press on June 30, 1918.

Ed. Note.—Mr. Selfridge is the American merchant who has "captured" London with American methods. He has often been quoted in the United States since our entrance into the war as "an authority on the business side of war."

we could to break down prejudices. We made people stop, look, and listen. Then the store itself did the rest. We now talk to millions of people every day through our advertising columns, and they believe in us, trust us, respond to that advertising quickly and continue to be our customers in all kinds of weather. The large business enterprise that is not going the limit in advertising just now is making a huge mistake.

Now, more than at any other time, it is necessary to push the display advertising. If retrenchments appear necessary they should be made in every other department but the publicity one—the newspaper-advertising one. These prices they are soaking us now for space are simply awful—but I'll take more space if they will give it to me.

D. KEEP BUSINESS NORMAL[1]

The United States has agreed to do its full part in the war. If it is to do its full part it must protect itself against panic. Certain tendencies are now making themselves felt which are likely to make the people over-apprehensive and to produce commercial insecurity if they are not halted. We must produce all the provisions we can. We must avoid waste as a patriotic duty. These are movements to enlarge the commercial activities of the nation, not to contract them. The United States directors of the International Association of Rotary Clubs therefore appeal to the people of the United States to keep business as nearly normal as possible.

But those who promise a rigid closing down of normal purchases to the line of bare necessity are promising a course which will choke the flow of our trade down to the lowest livable minimum. If the women of the United States stop buying clothes in order to give money to any one of a hundred worthy war causes we shall very shortly have a series of failures among American merchants dealing in woman's ready-to-wear garments. Business is a great chain of interlocking enterprises. If the grocers fail, or the house-furnishers, or the dealers in any other commodity, their failure brings something of disaster into every other field of commerce. The reasonable prospect, therefore, of the cries now being sounded for restrictions beyond the stoppage of waste is a general disturbance of business conditions which will threaten the whole nation with calamity.

Great Britain adopted a slogan at the outset of the war which American business men will do well to make their own at this stage

[1] By the International Association of Rotary Clubs, representing all types of business, with organizations in more than two hundred American cities.

of our participation in the same war. It was "Business as Usual." If the country can continue its general business substantially as usual it can meet the new war taxes and subscribe to the new war causes somewhere nearly in accordance with its means. But if there is a panic, the return from the taxes and the subscriptions to the relief movements will both suffer heavily. The Rotary Clubs of the United States believe that citizens render patriotic service in this situation who close their ears to propositions menacing the normal business conditions of the country. Workingmen who desire to continue at work, merchants who desire to keep open their stores as usual, manufacturers producing wares other than munitions, have a common need and a common opportunity to serve their families, their country, and their war by silencing everywhere alarms over the effect of the war upon business and unconsidered movements for economy. The surest way to preserve American prosperity is to maintain normal industrial, commercial, and social activities.

2. THE APPEAL TO SAVE

A. LUXURIES AND EXTRAVAGANCE IS TREACHERY[1]

Luxuries and extravagance must go completely out of fashion—they should, in fact, be considered little short of treachery. There is not enough capital, labor, transportation, or raw material to go around if those industries which are not essential to the conduct of war are continued at their normal productiveness. Every unessential industry which continues in operation must be considered as bidding against the nation for its life's blood. Every unessential industry which burns coal deprives the essential industries by just so much of the supply available for their purposes. Every man who buys a new overcoat is bidding against Uncle Sam, who is buying overcoats for soldiers. And every dollar spent on a luxury is helping to support an unessential industry in the competitive consumption of essentials.

B. CONSUMPTIVE SLACKERS[2]

If I were to stand on the street corner or some other public place and lift up my voice in impassioned oratory to persuade men to stay out of the Army and the war industries, saying to them, "Don't

[1] Adapted from Third Liberty Loan Committee of the Federal Reserve Bank of New York.

[2] By Thomas Nixon Carver. In *New York Evening Post*, February 11, 1918. Ed. Note.—Mr. Carver is professor of political economy at Harvard University.

enlist! Don't go into the shipyards! Don't go into the munition factories! Don't go into the coal mines! Don't work for the railroads! Don't go onto the farms to help produce food!"—I should certainly be mobbed, if the police did not take me to jail, and I should deserve all the rough treatment that I should receive.

There are other and more effective ways than street oratory of persuading men to stay out of the industries which are essential to the running of this war. Street oratory seldom accomplishes anything, and the street orator who tries to keep men out of the war industries is not a very serious menace, though he ought clearly to be abated as a public nuisance. If I really wanted to accomplish such a disloyal purpose as to keep men out of the war industries, I should spend as much money as I could for nonessentials and should advise everyone else to do the same. I should publish articles advising against too much economy and should do all in my power to get people to spend their money for nonessentials. I should advertise nonessentials in as alluring forms as I could invent. Every dollar which is spent for these things will hire someone to make and sell them, and the more these things are bought the more man power will be hired to stay in the nonessential and out of the essential industries. That is a much more effective, as well as a much safer, way of keeping men out of the war industries.

I am not a believer in mob violence, but if there is anyone who deserves to be mobbed, it is not these poor simpletons who make ineffective speeches against working in the war industries, though they are bad enough: it is rather those respectable people, some of them in positions of high authority, who still persist in advising people that they must continue spending their money freely for things which they do not need, in order that business may not be disarranged.

C. THE FUNCTION OF WAR SAVINGS[1]

The war savings movement is not a campaign to sell bonds in small denominations; the war savings movement is essentially a movement to release labor and capital—meaning, by capital, farms, and mines, and factories, and railroads, and ships, and all things concerned with

[1] By Dwight W. Morrow. Adapted from "The Meaning of the War Savings Movement," in *Economic Conditions of Winning the War* (Proceedings of the Academy of Political Science in the City of New York), VII, 711–14. Copyright by the Academy of Political Science, 1918.

Ed. Note.—Mr. Morrow, a prominent attorney associated with J. P. Morgan & Co., New York, is director of the War Savings Committee for New Jersey.

production and distribution—meaning, by labor, those who render service of any and every kind. The war savings movement is essentially a movement to put the entire national output, over and above the requirements of healthy and efficient sustenance, at the disposal of the government in order that it may be abundantly supplied with all things needed at the point of contact with the enemy.

It is the purpose of the War Savings Committee in this country to do something of the work that was done and is being done by the War Savings Committee of England, to bring that fact home to all the people of the United States—the fact that war is a most unusual business for a peace-loving nation. When the War Savings Committee started in England, when they expressed the very ambitious purpose of teaching political economy to all the people of a nation, they were laughed at. Yet that is what they attempted. They went before the people of England with a simple and fundamental proposition: "No one ever spends anything without making someone else work for him. No one ever spends anything without making someone, somewhere, somehow, work for him. Just now in the present emergency every time the individual spends money for something he does not need he deprives the government of something, some goods or some services, that it needs to fight the enemy. That is the lesson that the War Savings Committee have worked to bring home to every family in England, and their efforts have been rewarded with a very large measure of success.

A direct result of that lesson was what Mr. Blackett well refers to as the gospel of goods and services. We hear a great deal of talk about wars being fought with money. Wars are not fought with money. Wars are fought with goods and services. When fought by a nation which has been organized almost entirely for peace, wars are fought by services rendered and goods produced, in very large measure, during the war. That is what is known as the gospel of goods and services.

They speak of it as a gospel because the doctrine has been spread with something of the enthusiasm which accompanies religious movements. It means simply this, that at a time when a government is demanding more goods and more services than the country can produce, those who are requiring unessential goods and services for personal use are doing a direct harm to the government by their competition with it. It makes no difference whether a man or a woman or a child can afford to command goods or services or not;

the nation cannot afford to have the individual command goods and services for nonessentials when goods and services are required at the point of contact with the enemy, and required before they are too late.

The war savings campaign, which will grow stronger and stronger as the war goes on, means much more than a direct money contribution to the prosecution of the war. The saving of money is not of the greatest importance. The saving of money is a means to an end. The world must save the things that money stands for: goods and services. The world must save capital and labor. When the people of this country get the habit of thinking in terms of goods and services instead of in terms of money the government's task of carrying on the war will be rendered much easier. Moreover, the results of that thinking will surely continue after the war. Surely the new ideals, the new habits of living, which we shall have acquired will contribute their full measure of strength to the rebuilding and the upbuilding of things and of men in the days of peace that are to come.

LI. The War Finance Corporation

1. REASONS FOR ORGANIZATION OF THE WAR FINANCE CORPORATION[1]

Just at the close of January the Secretary of the Treasury announced a project for the establishment of a so-called "War Finance Corporation" designed to support and confirm banking and industrial credit. On February 9 he appeared before the Senate Finance Committee for the purpose of advocating the adoption of the plan in a definite form. The proposed measure is intended to meet the conditions produced by the decline of securities and the possible effect of withdrawals of funds from savings banks unable to liquidate their long-term investments.

The government's borrowings, particularly during the period immediately preceding and following each Liberty Loan, have tended to pre-empt the credit facilities of the banks and often to prevent them from giving needed and customary help to quasi-public and private enterprises. In not a few cases some such enterprises engaged in work more or less directly essential to the war have been prevented from obtaining the advances necessary to enable them to perform

[1] Adapted from "Washington Notes," *Journal of Political Economy*, XXVI (February and April, 1918), 206, 409–10.

essential service because bank credits ordinarily available are being absorbed by the government itself.

To accomplish these ends there is planned a corporation with a capital of $500,000,000 subscribed by the government and authorized to issue its own obligations to eight times that amount, or $4,000,000,000. These obligations might be issued to any one or all of three classes of borrowers: (1) to banks which have made advances to, or become purchasers of, the paper or obligations of enterprises deemed essential or contributory to success in war; (2) to savings banks requiring assistance; and (3) in exceptional cases directly to enterprises which are engaged in war work. Notes issued by the concern would be given to such banks or private undertakings against the latter's own obligations secured as circumstances might permit.

The War Finance Corporation bill, which passed the House of Representatives on March 21, was signed by the President on April 5, and thus becomes law. In a number of respects it has been subjected to important modifications since its first introduction in Congress. One which is of most importance to the Federal Reserve System is found in the provision relating to the conditions under which paper collateraled by obligations of the War Finance Corporation may be admitted to discount at Federal Reserve banks. In effect, what has been done by the legislators has been to apply two methods of restriction or regulation, the one seeking to make plain the fact that short-term commercial paper is still to have the preferred position at Federal Reserve banks, the obligations of the War Finance Corporation being given a secondary status by the establishment of a differential rate of 1 per cent against them; the other being the limitation of War Finance discounts to those cases in which a bank presenting such paper is able to state that it is not possessed of commercial paper available for use as a basis for rediscount.

The obligations of the War Finance Corporation are necessarily of a nature intended for investment rather than for banking uses, and the opening of Federal Reserve banks to them must consequently be regarded merely as a provision designed to strengthen their technical position and to set at rest the attitude of the government with respect to them rather than a provision adopted in the expectation that any considerable volume of business in such paper would actually be undertaken by Federal Reserve banks. Assuming that they are thus in effect an emergency resource, it is not to be expected that they would come in large volume to Federal Reserve banks, and it is to be hoped

that they would not find a permanent lodgment in any considerable quantities in the banks in general. Among the provisions now incorporated in the final draft of the War Finance Corporation measure is one which removed the power granted by the original bill to Federal Reserve banks to undertake open-market operations in the securities of the War Finance Corporation. Such advances as they make on the securities of this corporation must now, therefore, be dependent upon the application and indorsement of a member bank—a situation which merely limits the possibility of operations designed purely to aid the market.

The powers of the War Finance Corporation remain very large, and the connection between it and the Federal Reserve System is close enough to permit, theoretically at least, a very considerable draft to be made upon the Federal Reserve banks unless the new corporation is conducted with great care and conservatism.

2. WAR FINANCE CORPORATION UNIMPORTANT[1]

The War Finance Corporation is organized and ready to do business, but a serious difficulty has been encountered in dealing with the class of cases for which it seems to have been chiefly designed, which consists of corporations in need of capital either for refunding or expansion purposes. It had been assumed bankers would provide the capital wanted in such instances and then recoup themselves by borrowing upon their own notes through the War Finance Corporation, which, above its own capital of $500,000,000, would obtain credit at the Federal Reserve banks. But it develops, as might have been foreseen, that bankers are unwilling to expand their liabilities in this manner. Commercial bankers would be outside their proper field of operations in lending their credit for the purpose of providing fixed capital, and investment bankers would find the policy equally impracticable. Their business is not to carry investments but to distribute them, and they need to have their capital in hand.

The fact is that loans of the character contemplated do not belong in commercial banks or in the reserve banks, and it was a mistake to plan for the handling of them through this channel. They should go to the investment market, and if they cannot stand alone there have such help as may be necessary from the War Finance Corporation or the government. It is true that the government does not like

[1] From monthly bulletin of National City Bank, New York, July, 1918.

to divide the public market at this time with other applicants for capital and should not do so except as the services of other applicants are of public importance; but if their services are indispensable and their needs imperative, there is no escape from it, and it is useless to camouflage the situation by throwing them upon the reserve banks. The largest of these demands are for refunding purposes, and these do not reduce the supply of capital on the market. Now that the government, through its control not only of flotations but of the industries, virtually has control over the capital reservoir, it loses practically nothing by allowing refunding offerings to go to the public, and their success is mainly a question of terms.

Presumably the public-utility companies can handle themselves by meeting market conditions if their credit is supported by fair treatment on the part of the communities in which they are located. It is perfectly evident that the public utilities are in a hard situation, with their income restricted by fixed rates of compensation and their expenses increasing under war conditions. The situation is so plain that the public should not hesitate to meet it. Since the federal government has become responsible for railroad earnings it has been prompt to recognize the necessities and to safeguard itself with a liberal margin to spare. The example should be adopted by municipalities to the extent of allowing a fair readjustment of earnings to expenditures. If, beyond doing this, something more is necessary in some instances, the capital and credit of the War Finance Corporation may be properly used.

XI

PRICES AND PRICE CONTROL

Introduction

The subject of price levels and their movements is a particularly fruitful field for economic fallacies, because it is so easy to think of the problem in terms of prices alone, whereas the fundamental facts are the volume of production of commodities and the sharing of those commodities among the people. Prices are only an instrument in bringing this about. Now a shortage of production cannot be turned into prosperity for producers in general (including wage earners and lenders) by freedom to raise prices, and, on the other hand, the consumer cannot be saved from all the effects of a shortage merely by keeping prices down. A revolution in prices does mean increasing the cost of the war, as the report of the British Committee indicates (Section LVII), and injustice between classes, as is shown in the reading on "The Necessity for Price Control." It also makes necessary a general raising of wages, and this means friction, strikes, and the stoppage of work.

It is becoming the fashion to say that in controlling prices the government is "repealing the law of supply and demand"—this statement being probably most often made by persons who would have some trouble in stating accurately just what the law of supply and demand is. It is true that prices are fixed at different levels from those which would have resulted from leaving supply and demand uncontrolled by anything save the prices that free bargaining would fix, but it is not true that prices can be fixed without any reference to the necessity of making supply and demand equal. If prices are to be kept down, it can only be by furnishing some other method than that furnished by high prices for stimulating supply and for apportioning the shortage. The attempts of government to influence prices act within limits, as Mr. Sidney Webb (selection LIII, 3) indicates, and these limits are set by their ability to stimulate production and cut down consumption in other ways than by raising prices (selection LV, 1). In time of war, patriotism has great power for both purposes. The Food Administration has enlisted both producers and

consumers as members, pledged to co-operate in its policy. However, the control of the consumer can be made more drastic and certain by working through the producer, and our typical policy seems to be to put the producer on rations, so to speak, and let him satisfy his customers as best he may. If his prices are kept down, he will have to face an excess of demand over supply, and must handle it as best he can.

There are almost as many kinds of price-fixing as there are commodities. The mere letting of government contracts controls prices, and the concentrated buying for our Allies controls them more powerfully. There is control by agreement as in the case of metal, control by legislation as in the case of wheat (backed by the power to purchase), control by executive order as in the case of coal, control by arbitration as in the case of milk, and there is control of prices through control of profits as in the case of meat packers, flour millers, and dealers in general. There are guaranteed minimum prices to stimulate production, and maximum prices to protect consumers. Control of profits takes as its standard a margin of so much per barrel for flour, a percentage return on capital or on sales for meat packers, or the pre-war level for dealers in many essential commodities. Each of these policies is different from the others in its possible effects. If one price is fixed, it must be high enough to pay the "marginal" producer, and thus yield high profits to those who have advantages of one sort or another (selection LIV, 1); but in the case of coal the favored producers are forced to share their gains with the consumer, even though this means selling better coal at a lower price in the same market. (See Van Hise, *Some Cases of Price Control.*) Similarly, dealers in food stuffs who had bought at low prices have been forced to sell cheaper than their competitors who had bought the same commodity at a different time and at a higher price. This policy is possible, as Van Hise points out, because the demand is strong enough to take the whole supply at the highest prices, so that consumers who get lower prices are favored, as they would not be in an open market, by being presented with a share of the "producers' surplus."

Many knotty questions are raised. What is a farmer's investment in his land, and what is a fair return on it? If the land is taken at its present market value, should the farmer get 5 per cent on that value, if the farming class have for years bought land at prices as high as thirty times the worth of the yearly net income from it?

This seems obviously fair to many people, but it would lead to an endless spiral of rising prices. If a piece of land yields $1,000 and is worth $30,000, its owner could demand an increase in prices that would net him $1,500. After he had got this increase, his land would sell for $45,000 and his next season's demand, would be for prices that would net him $2,250, after which the price of his land would rise again, and so on. Other problems arise in calculating investment and profits and in standardizing products. The rules on these matters, which the readings contain, are but faint foreshadowings of what would be necessary if price control were to be general and permanent. In taking the producers' books as they stand there is injustice, because accounting practice differs from one producer to another, and a uniform accounting system must be prescribed if this sort of unfairness is to be prevented.

In general the control of prices in war differs radically from the price control of peace times, particularly in America, and methods have been used which would seem like intolerably rough-and-ready makeshifts to one trained in the circumspect procedure of our courts and commissions. For one thing, war-time control of temporary competitive gains due to shortage does not attempt to cut margins of profit nearly so fine as peace-time control of the more permanent and relatively safe gains due to a natural monopoly. The willingness of producers to co-operate has possibly enabled the government to get results by methods that could not be used permanently. But, on the other hand, it is also possible that something of the freedom and "get-there" quality of war-time regulation may remain to color the policies of the future. The ultimate outcome will doubtless be determined, as the war policy has been, by experimenting and by meeting the problems of the future as they arise.

LII. The Revolution in Prices

1. THE RISING PRICE LEVEL[1]

Some idea of the shrinkage of the dollar since the coming of the war can be got from the index-number of wholesale prices published by the U.S. Bureau of Labor Statistics (July, 1918). The commodities covered are grouped into farm products, food, clothing, fuel and light, metals and metal products, building materials, chemicals and

[1] An editorial.

drugs, furniture and house furnishings, and miscellaneous. The percentage in average price-increase since 1913 is as follows:

1913	1914	1915	1916	1917	1918		
					Jan.	Feb.	Mar.
100	99	100	123	175	185	187	187*

*Based on preliminary figures.

2. FUNDAMENTAL CAUSES AND EFFECTS OF THE RISE[1]

The gradual growth in the expenditure upon the war is due, not only to new services and increased demands, but also, in no small degree, to the increase in prices. It may be calculated very roughly that an all-around increase of 10 per cent in wages and in the cost of commodities purchased at home now involves an increase in the national expenditure of about 130,000,000 pounds a year.

Your committee have consequently found themselves obliged to extend their inquiry into the causes of the increase in prices and the possible checks that may be applied.

The chief causes are: The expansion of credits during the war; the demand for commodities exceeding the supply and the inadequacy of Government action to control prices; increases of wages and consequent increase in the cost of production; increases in the rates of profit; unfavorable rates of exchange in some countries from which supplies are imported.

Some of these are at once effects of the increase of prices and causes of further increases. It would be difficult, and it is also unnecessary, to determine what is the order of importance of these various factors. But it is certain that among the most important is the expansion of credits. The responsibility for the rise of prices, so far as it is due to this cause, rests partly with the Government and partly with the public. There have indeed been very large increases in taxation, and vast loans have been raised from the savings of the people. But to the extent to which this policy has not been pursued and instead fresh credits have been created, the Government has given the power to

[1] From a report made by a select committee of the British House of Commons, reported in the *Economic World* (March 30, 1918), p. 441.

the public to spend more freely on things, instead of investing in Government securities, raises prices against itself.[1]

Demands from the working classes for war bonuses or wage increases are based, as a rule, on one or more of the following grounds:

a) The cost of living has increased and wages must be increased also in order to enable the working-class family to pay its way.

b) The employing class is making large profits out of the war, and so long as they do so, it is legitimate that the working classes should do the same.

c) The demand for labor exceeds the supply, and it is inevitable therefore that wages should rise.

d) The worker's output has been increased, and he is entitled to a higher wage in consequence.

e) Increases have been given in one industry or in one grade, and, in order to prevent inequality or unfairness, increases must follow in other industries or grades as well.

We shall examine each of these points in turn.

It is generally agreed that with the great increase in the cost of living which has taken place during the war—whatever may be its causes—it would have been neither just nor practicable to have kept wages at their pre-war level. We have formed no estimate of the extent of the rise of wages which has taken place, nor its relation to the increased cost of living. The rise has not been equally distributed, and to arrive at the facts would have involved a prolonged and detailed inquiry into the movement of wages in all the industries, and in all the grades of labor in each industry throughout the country. We therefore express no opinion on these points. Moreover, on the other side of the account, the extent to which the cost of living has in fact increased does not appear to have been ascertained with any certainty.

Increases of wages have in some cases been secured apart from any question of the cost of living through advantage being taken of the shortage of labor supply in relation to the demand. However legitimate this may be in time of peace, it should be remembered that in existing circumstances it is a direct cause of further rises in prices, and of further increases in national expenditure. At the same time, it is essential that if labor is asked to forego the advantages of its economic position from motives of patriotism, the same measure should be effectively applied to capital.

[1] Ed. Note.—Cf. selection XLVIII, 3.

So far as increased earnings follow increased output due to greater effort or skill, they do not involve increase in the cost of production or in prices, though they would have the effect of preventing a reduction.

It is the case that increases of wages in one trade or grade have been used as a reason for further increase in others, on the ground of similarity, and apart from questions of cost of living. Hitherto there has been no effective check on this competition. Several different authorities have been dealing with wage questions in different industries independently of one another, although it has been obvious that the course taken by any one of them must tend to be used as a precedent for the rest. We find, indeed, that there is frequently wanting a proper co-operation between Government departments in dealing with labor, which sometimes passes into active competition.

Fresh cycles of wage advances succeed one another. Each one results in further increases of prices or in preventing a reduction of prices. An individual trade may obtain, by a wage advance, temporary relief from the increase in the cost of living, but only, as a rule, at the expense of all other trades. And the gain is short-lived, for the result is a demand from the others for similar advances, which raise the cost of the commodities which they produce also. The producers are raising prices against themselves as consumers. Meantime the cost of the war is vastly increased. We are deeply impressed by the seriousness of the position in this respect, and are convinced that if the process continues the result can hardly fail to be disastrous to all classes of the nation.

Our recommendations in respect to those aspects of the question of prices which are dealt with in this report are as follows:

1. Whatever measures are possible should be taken by the Government to avoid the creation of new credits in financing the war.

2. An inquiry should be set on foot to ascertain what has been the actual increase in the cost of living to the working classes, and how far it has been counterbalanced by advantages apart from wage advances due to war conditions.

3. The measures for the limitation of profits should be continued and strengthened, and should be made more widely known to the people.

4. The strongest case should be required to be established before any advance of wages is conceded on any ground other than the rise in the cost of living. Nor should it be regarded as a rule—and we

have no reason to think that labor in general desires that it should—that wage earners, in receipt of not inadequate pay before the war, should be exempted from all share in the economic sacrifices involved by a state of war.

5. A single policy under the general direction of one authority should be adopted in all industries in the determination of wage questions.

3. AGGRAVATING FACTORS[1]

The causes of mounting prices.—The fundamental cause of the mounting prices is that which has already been explained, an unusual and extraordinary demand from abroad for all essential commodities. However, this has been only one factor in the process.

When it was once appreciated that there was a relative shortage of the essential commodities, the home purchasers, instead of buying ordinary amounts, purchased in advance of their needs. Thus the family, instead of buying flour by the sack, bought a number of barrels, or, in some cases, bought flour for years ahead. The same is true in regard to sugar. Similarly during the spring and summer of 1917, when it was appreciated that there was a shortage in coal, many manufacturers were trying to protect their businesses by accumulating reserves to carry them through the winter. The same was true of those who desired coal for heat. The consequence was that the demands of purchasers were far beyond what would have been necessary to meet actual needs had the ordinary procedure been followed. This frenzy of excessive buying has greatly aggravated the situation.

Another most important cause of the enhancing prices was that a time when there is great demand is especially advantageous for speculators to accumulate great stores of goods of various kinds and hold them for advances in prices. This was done on a great scale throughout the country for every essential commodity.

Finally, when the conditions are as above, it is especially easy for those in a given line of business at a particular locality to co-operate to push prices upward and thus greatly increase the profits of their business. This also was done on a vast scale for many commodities.

Based upon the first factor, the second, third, and fourth factors have come in, each with reinforcing power, to accelerate prices.

[1] By Charles R. Van Hise. Adapted from *Conservation and Regulation in the United States during the World War*, p. 33.

ED. NOTE.—Charles R. Van Hise is president of the University of Wisconsin.

The tendencies above described, once started, are cumulative, and the enhancement of prices goes on with increasing velocity. The prices of foods are advanced; the employees must have higher pay because of the increased cost of food; the raw materials for manufactured articles are advanced; the manufacturer charges a higher price for his articles because he must pay more for his labor and an increased price for his raw materials. The cycle thus completed is begun again with food, and so on indefinitely, with the result that prices have been and still are rising beyond all reason, like a spiral ascending to the sky.

4. INCREASING PAY TO BALANCE INCREASED PRICES[1]

The committee recently appointed to make a further investigation of increased living costs established a basis for its report by determining:

1. The percentage of various annual salaries expended as of the year 1915 for food, clothing, and rent.

2. The percentage of increase in average price of these items during the last six months of the present calendar year over the calendar year 1915.

Increased living costs have been mostly evidenced in the price of food and clothing. Carfare, insurance, light, etc., have not as yet reflected any noticeable increase, and rent to only a relatively small degree.

The average index number as established by the committee for the six months ending December 31, 1917 (December estimated), shows an increase of 86.2 per cent over the average index number for the calendar year 1915. The committee has been at some pains to substantiate these findings.

The committee has throughout its considerations attempted to arrive at a conclusion which would conservatively, rather than liberally, compensate for the actual increase in living costs. Chapin's table was accepted with but minor adjustments. It represents workingmen's living standards, which are admittedly lower than those which must be maintained by the bank clerk. The 85 per cent increase in food and clothing prices is considered equitable, but conservatism has prompted that a flat 80 per cent increase in these items be accepted as a basis of compensation at this time. The 80 per cent increase in food and clothing prices, of course, applies

[1] Adapted from reports of committee of Bankers' Trust Company, New York.

only to those who have been continuously in the employ of the company since June 30, 1916, when living costs first showed a material advance. The basis of compensation for employees engaged after June 30, 1916, is determined upon the percentage increase in clothing and food prices as indicated by the average index number for the month in which the employee is engaged in relation to the average index figure for the six months to be compensated for. The basis is detailed in Schedule "H." An increase of 10 per cent over 1915 has been considered equitable to compensate for increased rentals, including fuel.

The committee recommends that compensation for the six months ended December 31, 1917, be distributed in a lump sum on the basis of the above findings.[1]

The abnormal upward trend of prices,[2] both wholesale and retail, in recent months has indicated the probability that wholesale prices increase more rapidly in a period of expansion than do retail prices. Presumably, the retailer purchases some months in advance of his requirement for goods, and at prices then prevailing. The committee is persuaded that at present considerable divergence would be found if an actual increase in wholesale and retail prices could be determined. The percentage increase found by the committee in its last report (covering the six-months period July–December, 1917) was reduced 6 per cent in consideration of the probability of such divergence.

It seems evident that the causes which have resulted in price increases already realized will be intensified if present requirement for war products continues. The committee questions if Bankers' Trust Company, which cannot in these times be assured of profits commensurate with the decrease in the purchasing power of money, should, in equity, continue a policy which, for the duration of the war, would relieve its employees in every instance *entirely* from the common duty of retrenchment and reduced uses of essentials, which should now be a voluntary and willing sacrifice by all.

The modified basis of extra remuneration here recommended is calculated to meet the foregoing considerations. Distribution is calculated upon a 60 per cent increase in retail cost of food and clothing

[1] This is from a report of December 15, 1917.

[2] From *Compensation for Increased Living Costs*, report of committee covering the six-months period ending June 30, 1918.

and a 10 per cent increase in rentals. The 60 per cent increase in food and clothing costs was arrived at by careful weighing of much independent data of retail-price changes, by examination of individual family accounts, and by comparison of wholesale and retail prices of many items the retail cost of which could be fairly sustained.

The committee recommends that those in receipt of salaries of $1,100 to $1,299 per annum receive the highest percentage of compensation, as it still feels that this class carries the greatest burden.

The following abbreviated table, preferred by the editors, is based on the two reports of the Bankers' Trust Company committee, from which extracts are given above, and indicates the methods used in calculating compensation. The bonuses apply to employees hired before July 1, 1916, and those employed later receive less, on a graduated scale. The reason for being particularly liberal with salaries from $1,100 to $1,299 seems to be that these are the lowest salaries paid to married men with families to support. Salaries above $2,500 received the same number of dollars increase as those of $2,500.

I Salary Basis in Dollars	Estimated Percentage of Salary Expended for		Increased Cost of Food and Clothing above 1915 Average Percentage of Salary		VI Increased Expense for Rent above 1915 Average Percentage of Salary 10% of Column III	VII Bonus Granted, Last Half of 1917, Column IV + Column VI	VIII Increased Expenses above 1915 Average Percentage of Salary, Column V + Column VI	IX Bonus Recommended First Half of 1918
	II Food and Clothing	III Rent	IV Last Half of 1917, 80% of Column II	V First Half of 1918, 60% of Column II*				
500– 599..	57.4	25	45.92	34.44	2.5	48.42	36.94	35.0
1,100–1,199..	60.5	25	48.4	36.3	2.5	50.9	38.8	40.0
1,200–1,299..	62.0	24	49.6	37.2	2.4	52.0	39.6	40.0
2,400–2,499..	57.0	20	46.5	34.2	2.0	47.6	36.2	30.6
2,500.....	55.0	20	44.0	33.0	2.0	46.0	35.0	30.0

*Reason for lowering basis from 80% to 60% is given in report.

LIII. The Need for Control

1. THE NECESSITY FOR PRICE CONTROL[1]

The conduct of war on an extensive scale is invariably accompanied by a rapid rise in the cost of living. The increase in prices is not confined to supplies that are required in great quantities by the

[1] By Harold G. Moulton. Adapted from "Some Dangers of Price Control," *City Club* [Chicago] *Bulletin*, September 10, 1917.

armies in the field; it seems to apply with more or less severity to all classes of goods, to practically everything that enters into the general consumption of the people. The high cost of living, therefore, becomes one of the most acute of the internal problems connected with war; and the regulation of prices in the interests of the masses is regarded as one of the most important duties of the government.

There appear to be two lines of reasoning—perhaps one might better say two sorts of reactions—that favor government control of prices. One is a popular argument and the other may be called for want of a better term a "scientific" argument. In the view of the general public high prices in war time are in considerable measure the result of manipulation by traitorous malefactors who take advantage of the government's needs and the public's ignorance and lack of organization—who reap where they have not sown, who make fortunes, indeed, without rendering any equivalent in service to society. The control of prices in the interests of the many as against the machinations of the few, therefore, makes a simple and elementary appeal to our notions of right and wrong, to our sense of plain fairness and justice.

Closely associated with this reason for price control is the idea that large profits should not be permitted, even when they do not result from manipulation, monopolizing, or unfair practices, for the simple reason that it is unpatriotic to reap advantage in any way from the government's needs. "Profiteering" becomes in war time a new form of evil, one which should be suppressed with a strong hand.

The more carefully reasoned argument for price control recognizes that the causes of rising prices cannot be wholly ascribed to the machinations of speculators, traders, middlemen, and monopolists, or to an enormous government demand; that it depends, indeed, mainly upon fundamental underlying conditions, upon the demand for and supply of commodities in general, or, as some would prefer to put it, upon the quantity of money and credit available for purchasing such goods. But the "scientific" argument for price control does not depend upon the causes of rising prices; it merely accepts the fact of high prices and uses this fact as a point of departure. The real arguments are: First, that the high prices which the government has to pay for the materials it needs greatly increases the money cost of the war and necessitates a heavier burden of taxation than would otherwise be required. Second, the high prices that the public is compelled to pay for commodities that enter into general consumption

result in lowering the standard of living of the masses, in consequence of the failure of wages and salaries to advance with equal rapidity. This loss of consuming power falls with unusual severity upon people of moderate incomes, upon those least able to stand the burden, and hence is one of the most important of the indirect burdens of war. Indirectly, these losses may be regarded as costs of the war, costs which fall in inverse ratio to ability to pay, thus violating the most fundamental principle of just taxation. Price control is, therefore, a necessary corrective of the inequalities of war burdens.

Pushing this economic argument still farther, price control is necessary in order to prevent the poor from having inadequate consumption of wealth. The masses of society must be kept above the level of mere subsistence, in order that all may be physically efficient and mentally alert for the onerous business of war. Indeed, when a nation is pressed to the wall in a war of attrition, price control, together with a distributive dictatorship for the necessities of life, becomes an indispenable agency for equalizing wealth, for parcelling out the national store of goods in accordance with the physical requirements of people, rather than according to the fatness of their respective pocketbooks, thereby postponing as long as possible the date of final exhaustion.

Finally, price control has its political purpose. Just distribution of the burdens of war and alleviation of the economic pressure upon the lower classes serves to suppress the rising tide of discontent and internal dissension; it helps to maintain a united front and to buttress the courage of all classes at home; while at the same time it affords small comfort or hope to the enemies abroad. In a prolonged struggle it is indispensable as a means of maintaining the morale of the people.

2. WHERE PRICES ARE UNCONTROLLED[1]

List of Prices Paid in Petrograd

	Rubles
Potatoes, per pood (36 pounds)	150.00– 200.00
White flour, per pood	400.00– 500.00
Black bread (privately), per pound	10.00– 12.00
Eggs (very scarce), per piece	1.00– 1.20
Salted herrings, per piece	2.50– 3.00

[1] Ed. Note.—From a letter written by a prominent American business man from Stockholm, June 24, 1918. A ruble is equal to about 50 cents. These prices are in paper money, which was at this time worth about 10 cents on a dollar.

LIST OF PRICES PAID IN PETROGRAD—*Continued*

	Rubles
Veal (very scarce), per pound	12.00– 16.00
Beef (not to be had for any price)	.....
Sugar (varies greatly; has been as much as 100 rubles per pound) now per pound	35.00– 45.00
Lard (comparatively cheap), per pound	18.00– 25.00
Butter (comparatively cheap), per pound	16.00– 20.00
Milk (very scarce), per bottle	2.50– 3.00
Fresh cabbage, per pound	8.00– 10.00
Hens (kuritzy), each	30.00– 40.00
Pair of low quality boots	200.00– 250.00
Pair of socks of lowest quality	40.00– 50.00
One ordinary business suit—low quality	1500.00–1600.00
Hay, per pood	180.00– 200.00
Oats, per pood	300.00– 350.00

Horses that fall in the streets, and there are many of them, are utilized for food; animals of less prominence, it is said, are utilized for sausages.

3. BRITISH EXPERIENCE[1]

The British government has taken action to correct the inequalities of rising prices, first, by raising wages, and secondly, by seeking to arrest the rise of prices. By public exhortation and private counsel, by governmental influence and social pressure, and finally by act of Parliament, the British government has intervened actually to compel employers in nearly all industries to concede rises of wages—war advances and war bonuses—to the railway workers, to the workers in shipyards and munition factories, to every person employed in the whole engineering industry, to the couple of million women employed on all kinds of war stores, to the million coal miners, to all the government employees getting less than 150 pounds ($750) a year, to the school teachers, the farm laborers, and the rest. Altogether, it is estimated that the rate of wages has been increased in Great Britain, taking the whole wage-earning class, by about 20 to 25 per cent on an average. This falls far short of the increase in the cost of living, so that the rate of wages, measured by what it would purchase, has fallen considerably under the influence of war.

[1] By Sidney Webb. Adapted from the *Atlantic Monthly* (July, 1917), pp. 19–21.

ED. NOTE.—Sidney Webb is the foremost English student of labor problems.

The British government has also assumed the control of the railways and mines, of all the flour mills, of all the merchant shipping, and of all the munition factories; it has made itself the sole importer of sugar and wheat, and has become an importer on a huge scale of meat, rice, and many other things; it has taken over all the wool, leather, copper, and other raw materials; its Ministry of Munitions is now three times as great in its turnover as the largest single industrial enterprise in the world, not excluding the most extensive American trust. And wherever the government controls the supply, it fixes in one way or another both the wholesale and the retail price of the commodity, so as to limit the advantage that any dealer can take of the urgent needs of the consumer. No one doubts that this policy has been extremely successful in preventing prices, at particular times and in particular places, from soaring sky-high; nor does any instructed person imagine that a "law of maximum," without control of supply would be otherwise than ruinous to the poorer consumers.

What has been successful in Great Britain in economizing supplies has been a widespread appeal to the whole nation to limit its consumption of wheaten bread (4 pounds per week), meat ($2\frac{1}{2}$ pounds per week), and sugar ($\frac{3}{4}$ of a pound per week) to a prescribed maximum per person in the household; and to make up the necessary subsistence by the use of substitutes, such as fish, other cereals than wheat, and other vegetables than potatoes, of which the crop throughout all Europe has largely failed. More efficacious still has been the absolute government monopoly of sugar, secured at the very beginning of the war, and the drastic restriction of the total quantity allowed to be issued from store, the aggregate reduction being thus infallibly secured, and the retailers being left to share what sugar they obtained among their customers. It has been found useful, too, to make the wheaten flour go farther by compelling all the millers to include both an increased proportion of bran and a certain proportion of other cereals. More drastic measures are near at hand.

In the main, however, the government has been unable to prevent a staggering rise in prices of food-stuffs, which now reaches close upon 100 per cent all round; and consequently its obligation to secure an adequate increase of wages has been recognized. The average increase of 20 to 25 per cent, to which the employers have been compelled, has been eked out by (*a*) the liberal scale of separation allowances paid to the dependents of all men called to the colors, and of pensions given to the discharged men, these two items now amounting to five hundred

million dollars a year of direct government subvention; (*b*) the absorption into wage-earning industry, not only of all the unemployed men, but also of a large number of youths of either sex from 12 or 13 upward, of women married and unmarried, and even of old men who had been superannuated—thus greatly increasing the number of separate wage earners in the average household; and (*c*) the rapid spread of piecework in place of time work, and a general increase in the hours of labor, resulting, at the cost of greatly increased effort and strain, in a considerable increase in total earnings apart from any change in the wage rate.

The outcome seems to be that, in contrast with all previous wars, and with all other governments, the British government has this time been, up to the present, fairly successful in staving off any general fall in the standard of life of its people—a notable result of the advance in the United Kingdom of economic knowledge and of democratic influence. It will be interesting to see with what success America tackles the very similar economic problem with which it is now confronted.

4. DO BIG PRICES GET THE MOST WORK DONE?[1]

"Economy is a good thing in its place, but it must not get in the way of the supreme need of victory. We must pay liberally, because the paramount thing is to get results." This point of view contains much truth, and for that very reason it is peculiarly necessary to show that reasonable economy is still very important from this very point of view—that of the vital necessity for getting the most work done. The evil results of paying extravagant prices for government work and supplies are not fully realized, largely because most people think of them merely in terms of dollars and cents paid out from the federal treasury. Since the liberty loans have been successful and since the early expenditures fell far short of estimates, many probably feel that a little extra expense, while undesirable, is no very serious matter.

Nothing could be more dangerously fallacious. The government's inability to spend the amount of its estimates is the last thing in the world to be satisfied about. It is tangible evidence that our limits in this war are not those of dollars, but those of labor and materials. It means that our financial provisions and estimates have outrun our ability to turn labor and capital from the pursuits of peace to

[1] An editorial.

those of war. We would gladly spend more money if we could get correspondingly more war work done. Unnecessary profit-taking, or "profiteering," whether by capital or labor, is one obstacle to this turning of energy and materials into war channels. We do not lack funds, but we do lack competent labor in the places where it is needed in war work. Our supply of labor cannot be indefinitely increased, and its per capita efficiency is necessarily diminished by sudden shiftings to unfamiliar work. Any failure to make the best use of this limited supply of competent and mobilized labor is a loss that cannot be made good by any amount of government expenditure, government borrowing, or government taxation.

Apparently, wages were raised for such skilled shipbuilding labor as riveting past the point where increased wages call forth less work rather than more. Men have been able to earn over $100 a week in extreme cases, and at one time there were complaints that they loafed on the job or worked irregularly, taking days off to spend their wages, and drifting from plant to plant. This indicates that sudden and unwonted lavishness in wage payments is not merely an extravagance—it defeats its own end, in that it does not get the work done.

Profiteering (either by labor or by capital) works to the same result in a different way. It increases the unnecessary consumption of the profiteers, and this tends to keep more labor working to produce these nonessential goods than would otherwise be the case. Thus the nonessential industries tend to bid against the essential ones for the limited supply of labor, and thus virtually bid against the government and against the successful prosecution of the war. If nonessential industries are so rigidly controlled that it becomes impossible for them to use more labor and materials because of profiteers' expenditures than they would otherwise use, and impossible for the profiteers to spend any large part of their excess income on consumption goods, then a large part of this income must necessarily come back to the government in loan subscriptions. Thus in England the *nouveau-rich* laborer or contractor cannot hire other laborers to make him a piano, because the government does not allow pianos to be made. He can merely employ dealers and piano-movers to get him a second-hand piano which some war-pinched middle-class household has been forced to sell. If all unnecessary production were treated in this way the prosecution of the war would not be seriously interfered with by any ordinary profiteering (except through the hostility and sense of injustice that is sure to be aroused), and the question of profiteering

would be chiefly a question of justice. As things stand, however, the question is also one of efficient mobilization of our labor power to meet the needs of war, and from this point of view it is nearly as bad to make profits unnecessarily large as to make them so small or uncertain that no one will undertake the risks involved in doing the work that must be done. When the ship-worker knocks off work to spend his last week's wages, he is not merely depriving the country of the worth of his own labor, but he is hiring people to amuse him who might otherwise be building ships themselves, or doing some other war work. The same is true of the capitalist profiteer spending his profits. Profiteering is the way to prevent national mobilization.

LIV. The Case against Control

1. PRICE CONTROL AND INDUSTRIAL MOBILIZATION[1]

It is the purpose of this paper to direct attention to some serious dangers in connection with price regulation in the form in which it will likely be developed in the coming months. The agitation for the regulation of prices usually develops rather late in a war, but in the present conflict we are beginning very early, not only to agitate the question, but also to develop the machinery necessary to effective control. This in part is owing to the world-wide effect of the long-continued struggle in Europe, the enormous rise in prices abroad having found concurrent reflection in rapidly rising prices in the United States during the past two years; and in part it is due to mere imitation of the policy of the nations of Europe.

This early development of price control raises an exceedingly difficult problem, because under our voluntary system of industrial mobilization we rely upon prices and profits to attract industry into government service. If we keep prices down, particularly in war industries, will it "pay" business men to divert the productive power of the country to war business? We may consider a concrete case.

Several forms of price control have been suggested in one source or another, but the one that is most commonly advocated, the one that makes the strongest appeal to conservative public opinion, is price control based on cost of production. It is believed that industries, even those producing war supplies, are entitled to "reasonable" profits. And "reasonable" profits have to be reckoned from a

[1] By Harold G. Moulton. Adapted from "Some Dangers of Price Control," *City Club* [Chicago] *Bulletin*, September 10, 1917.

basis of cost. Let us assume that 6 per cent is a reasonable profit; then a plant producing a commodity at a unit cost (including selling costs) of $1.00 should be permitted to sell at not more than $1.06. To the uninitiated the problem of price control seems, therefore, a relatively simple problem.

I shall here pass over the difficult, if not impossible, problems involved in ascertaining the precise unit cost in any particular establishment, and confine myself to the problem of the varying costs in different plants engaged in the same line of activity. Plant A has a cost of $1.00; plant B of $1.10, and plant C of $1.20. These differences of cost may be due to various causes: Difference in location, difference in management, difference in volume of output, etc. But it is clear that the product of all is imperatively required. Price control, therefore, must not force any of them out of business. Now if the price fixed were $1.06 it would give a reasonable profit to plant A, but it would not even cover costs for plants B and C. The price must obviously be high enough to give a "reasonable" profit to the plant with the *highest* cost of production, with *marginal* cost, to use the common term of the economist. This means concretely, in the case before us, a price of $1.26. It should be noted, however, that this obviously means more than "reasonable" profits for all plants whose cost is less than $1.20. It means in certain cases enormous rates of dividend for certain peculiarly efficient or peculiarly fortunate establishments.

This necessity of basing prices on the marginal or highest cost of production in existing plants has been discussed in various quarters of late. But thus far I have been unable to find any recognition of the necessity of using as the basis of price fixing a cost that is actually higher than the marginal cost in existing factories. What do I mean? I mean that not only must price control not drive existing factories out of the production of war supplies, but that it must not cut off the inducements to business men to shift from non-war industries to war business. We have seen that the paramount necessity is industrial reorganization, the shifting of labor and capital from lines of activity that are unimportant for war purposes to the lines that are imperatively necessary. Price control, in the interests of the general consuming public, or as a means of lessening the money costs of the government for materials, must not be allowed to stand in the way of industrial mobilization. Let us consider the possible dangers.

X is a manufacturer of a commodity that is unimportant for war purposes. His plant could be made over into an establishment for

the manufacture of war supplies at a cost of $100,000. He reasons that since he has had no experience in this particular line of manufacture his management will not be very efficient the first year. Furthermore, his location is not favorable for this business, and his transportation costs for raw materials and unfinished products will, therefore, be unusually heavy. He knows that there is a scarcity of labor that is skilled in this line of work and that to get laborers at all he must offer high enough wages to induce them to leave steady positions elsewhere and cast their lots with him for a period of indefinite duration. He must, therefore, count on highly paid yet inefficient labor. He estimates his total outlay and finds that his cost would approximate $1.40 per unit, as compared with a top cost of $1.20 for existing plants in that line. That is to say, his cost would be $1.40 if he could charge off depreciation on this $100,000 expended in rehabilitation at the usual rate. But the duration of the war is uncertain. It may be that he will have to re-rehabilitate his factory before he actually has a chance to manufacture war supplies. In any event there is sure to be a heavy, but indefinite, obsolescence factor, which must be added as one of the costs of production. The exact total obviously becomes guesswork; but, let us assume that X could know that it would be not more than $1.60. This is a high cost, but prices of war materials have been soaring rapidly and they bid fair soon to reach $1.75 in this line. X has about decided to make the plunge, when Congress begins to discuss the problem of high prices and to insist that they must come down. X decides that he had better wait for a time and see what happens. Eventually, after many precious months have elapsed, we work out a fair price based on the marginal cost in existing factories—a price of $1.26, to use the illustrative case given above. Do we need to inquire further whether X will decide to manufacture war supplies?

2. PRICE FIXING BY GOVERNMENT[1]

Let us consider what is involved in the fixing of prices by law or executive fiat. If an omnipotent and omniscient being were to fix all prices, it is conceivable that the results to the whole community might be advantageous, although many individuals would be ruined. The President of the United States is not such a being, nor is Congress,

[1] By David MacGregor Means. Adapted from the *Unpopular Review*-April–June, 1918.

Ed. Note.—Mr. Means (1847—) is an editorial writer and frequent contributor to reviews and magazines.

nor all the great and costly horde of federal and state and city administrators with all their inspectors and subordinates and prosecuting attorneys. If there is no omniscient being to fix prices, there must be a great many ordinary human beings, some ignorant, some arbitrary, some acting on one theory, some on another, and some on none.

The coal famine is a startling illustration of what follows when rulers try to compel their subjects to do business from benevolence. When we went to war it was evident that more coal than usual would be needed, and miners and dealers put up prices to a very high figure. Coal is an absolute necessity. Consumers will pay almost any price rather than go without it, and producers and dealers took advantage of the demand. The matter was in the first place taken charge of by Secretary Lane, and after consulting with men representative of the industry it was agreed that three dollars a ton was a price at which soft coal could be produced and sold in normal quantities—although it was then selling for five or six dollars—and the business was not seriously interrupted. Secretary Baker and Secretary Daniels then appeared in the proceeding, and it was at once decided that the coal miners were not benevolent enough. A price of two dollars a ton instead of three was ordered, and the business was demoralized. Some mines could not be worked on that basis. Laborers had to be paid very high wages and were hard to get at that. It was not until October 27, when the situation became alarming, that Dr. Garfield, who had been made fuel controller on August 24, admitted that the attempt to do business on benevolent principles was a failure, and the price of soft coal was raised. It has since been several times increased.

It was too late. What had happened meanwhile? In some parts of the country the normal production of coal had been reduced. In many parts the usual stock had not been laid in. Some coal miners did not supply their best coal, but worked their inferior veins. Some coal was not carefully picked over, and gave out little heat, as many householders found out to their ultimate distress. The price of coke was not fixed; it rose to six dollars a ton or more. Now three tons of bituminous coal will produce, approximately, two tons of coke. Three tons of coal, sold for two dollars a ton, brings six dollars. Two tons of coke, sold for six dollars a ton, brings twelve dollars. One must be more than ordinarily benevolent to sell coal at a loss when coke can be sold at such a profit.

Dr. Garfield seems to have meant to favor the consumers of coal at the expense of the producers. He has no doubt caused loss to some

producers; but he has caused greater loss to many consumers. The poorest of them have suffered most. They have had to pay very high prices. Some of them could get no coal at any price. They have had to pay great sums for stoves and gas and oil. Millions of our people depend on kerosene for light and heat. Owing to the great demand for gasolene, kerosene had been cheap. It was almost the only cheap thing consumed by the poor. But the sudden demand for it raised its price, and those who depended on it were thus taxed because the production and distribution of coal had been interrupted by the attempt to fix its price.

What would have happened if the government had not fixed the price of wheat? In the first place the competition of the government buyers could have been stopped. There might have been one purchasing agent, and the existence of a cash buyer with unlimited funds able to absorb a third of the supply would itself have steadied the market. Speculators would have been cautious. The government had the power, since exercised, to take most of their profits away from them. It could have made all parties report their excessive profits every month, instead of postponing their collection till next June. Existing laws forbade combinations of dealers, and no single person can fix the price of such a staple as wheat, or long maintain it at an artificial price. There have been "corners" of wheat "on the spot." Some of them have been profitable to the men who managed them, others not. Some of them have at once collapsed. None of them has long maintained an abnormal price, as is proved by the fact that the price of bread has seldom risen to or been maintained at such a price. But when there is an actual dearth of wheat the price of bread must normally rise, and it is desirable that it should.

To refer to Adam Smith, the wheat grown in one year must last till the next. If there is a scant harvest, the usual consumption of bread must be diminished or there will be famine before midsummer. Consumers must be pinched now, or they will be starved then. If the price of bread had been allowed to rise by a half last spring—it would perhaps not have risen so much—consumption would have been at once checked. The bakers would have bought less flour, the millers would have ground less. A very high price for wheat could not have been maintained unless the buying of the government maintained it. It might be said that a very high price would not have been abnormal. There was a military necessity—our Allies had to be helped, cost what it might. Great profits would have been made,

but they would have gone to the farmers, who would thus have been encouraged to increase their production the following season.

But great expenses would have been avoided. The cost of the army of food administrators is enormous. Their interference with the natural course of prices has done little good and much harm. Hoarding—in our climate absolutely necessary as a safeguard against famine prices and an important regulator of consumption—has been penalized with little present gain and much later loss. Tons of printed matter containing all sorts of counsels and prescriptions and appeals and threats, many of them conflicting, many simply foolish, have burdened the mails and postered the walls and windows of our buildings. The government issued a proclamation setting up standard prices for staple groceries, bought for cash and carried away by the buyer. A company in New York City, supplying the wealthier class, advertises that its prices average lower than the government's, while it allows credit and delivers goods.

In a literal sense, man does not live by wheat bread alone. There are many substitutes. If flour doubles in price, people who live in the country and bake their own bread will buy less flour and use more of the other products of their land, and more of their land for these products—milk, poultry, nuts, fruits, vegetables. In the eastern states many farmers have this year raised their own wheat. Millions of our people like nothing better than cakes made from corn or oats or buckwheat. Millions in the cities, if they found that a five-cent loaf was to cost ten cents, would reduce their consumption of bread. Many have done this from patriotism or benevolence; a great many more would have done it when a high price made it for their own interest. This year, fortunately, the crop of potatoes is large, but they have not come freely to market. The price of bread being held down by our rulers, people ate bread rather than potatoes. The city dealers dared not hoard potatoes; they might be "commandeered." Potatoes are spoiled by frost; wheat is not injured. The relative cheapness of bread caused the farmers early in the season to hoard their potatoes; the early coming of winter and its severity has locked up these hoards. They may be later released; but all the time the consumption of bread has been abnormally stimulated by fixing the price too low.

But could the common people have paid more for their bread? It is said that Mr. Woolworth, in a recent conversation with the architect of the splendid building with which they have adorned the city

of New York, asked him how much iron was used in the structure. Mr. Gilbert reported the quantity as over 27,000 tons. "Last year," said Mr. Woolworth, "I sold in my stores more than that weight in candy." Now with the money which people paid for that candy they could have bought from 50,000,000 to 100,000,000 loaves of bread—the number varying with weight and price; and there are many sellers of candy besides Mr. Woolworth. In the fiscal year 1916 some twenty-one billions of cigarettes were consumed; in 1917 nearly thirty-one billions, costing perhaps $250,000,000—"one half-pennyworth of bread to this intolerable deal of sack."

We wish Mr. Hoover success in his aim. Perhaps it has not been attained, but possibly it will be attained. We shall believe him if he says it will be; but perhaps it might have been better attained by letting our people attend to their own interests under the natural law of supply and demand, rather than by compelling them to obey the arbitrary orders of a great number of petty dictators, very few of whom possess Mr. Hoover's wisdom and none of whom commands the enthusiastic devotion that he has so honorably deserved.

LV. General Estimates of American Policy

1. GOVERNMENT PRICE-FIXING IN THE UNITED STATES[1]

Economists have generally condemned legally fixed prices, pointing out the danger of stopping production if the price is held down, the ease of evasions, etc. History is full of cases where price laws have merely forced retailers to close their shops and left the market empty.

But at present the price-fixing policy seems to be working well with wheat and flour, anthracite and copper, although it has probably done much harm and little good in the case of bituminous coal. Even in this place there are possibilities of improvement, and the control over coal shipments, denying coal to nonessential industries, may turn out to be one of the most important parts of the whole scheme.

In ordinary times prices guide and control production. If prices rise in some lines, production increases there, drawing labor and capital away from industries where prices have not risen. If the state

[1] By B. M. Anderson, Jr. Adapted from the *Economic World* (January 5, 1918), p. 11.

Ed. Note.—Mr. Anderson is assistant professor of political economy at Harvard University.

interferes with prices it must provide a substitute for the price-control of industry. A mere legal fiat fixing prices must be a failure in the absence of effective control over the whole chain of industrial processes leading up to the price.

This control has come through law, moral pressure, public opinion. In war time a patriotic people generates a rich fund of social energy, which can be used to encourage and coerce men to make sacrifices. If men will fight and risk death to meet the group's demand, to be able to hold up their heads among their fellows, they will also produce copper without profit for the same reason if the social pressure can be made strong enough.

It is easy to put pressure on conspicuous men and great corporations. Copper and anthracite presented an easy problem. But the farmers are numerous, obscure, and scattered. It is virtually impossible to coerce them. A high price of wheat was necessary there. So with laborers. They cannot be coerced. High wages are necessary. Bituminous-coal mines are numerous and scattered. The cut in price was far too drastic there, although on the whole the trade was more scared than hurt, since existing contracts were respected, and the bulk of the output has not been sold at the government's prices. Jobber's margins have probably been put too low, and the jobbers have probably not been as active and efficient in routing bituminous coal as would have been the case had their margins been wider. Part of the railway congestion might have been avoided had the jobbers been more active and less interfered with.

One great gain, and a necessary part of the price-fixing scheme, has been the rationing of supplies, so that they would go where most needed. It is politically impossible to draft labor from the non-essential industries to the production of munitions and necessities of life. Yet this can be indirectly but effectively accomplished by refusing coal, copper, steel, cars, etc., to the nonessential industries. This is probably the most important feature of the general scheme.

2. A YEAR OF FOOD ADMINISTRATION[1]

No problem in the first year of the Food Administration's history has involved considerations of such subtle and far-reaching importance as the matter of price-fixing. The Food Administration both is and

[1] By Thomas H. Dickinson. Adapted from the *North American Review*, July, 1918.

Ed. Note.—The author, associate professor of English at the University of Wisconsin, is now a member of the Food Administration.

is not at the same time a price-fixing body. By Section 14 of the Lever Bill, which became the Food Control Law, the President is authorized from time to time to determine and fix a reasonable guaranteed price for wheat, and this section itself fixed the price for the crop of 1918 at not less than $2.00 per bushel at the principal interior primary markets. Pursuant to this section the President has, by two separate decrees, set the price of 1917 wheat and of the 1918 crop at $2.20 per bushel. Section 11 of the law authorizes the President to purchase and store and sell wheat and flour, meal, beans, and potatoes. Manifestly any purchase so made by the government would in effect fix the price. Aside from these delegations of power no authority is given by the Food Control Law to fix prices. And yet a study of the operations of these provisions as well as a regard for the implications of other functions of the Food Administration carry the conviction that price-fixing is a necessary and inescapable corollary of the effective prosecution of the Food Administration program.

There are many evidences that price-fixing has come to lodge itself as an unwelcome factor in the program of the Food Administration. Price-fixing came to be a fact even while avoided as a theory, and eventually it has become necessary to face it, if not to accept it, even as a theory. What are the evidences that price-fixing is essentially involved in the program of the Food Administration? One piece of evidence lies in the fact that when once you have fixed the price of one commodity the condition is bound to be reflected in other commodities. In fixing the price of wheat Congress fixed as well, though not so explicitly, the price of corn, and hogs, and sugar beets. The determining and administering of these prices it left to the Food Administration.

A further evidence that the Food Administration could not avoid the onus of price-fixing lies in the reasons for which the Administration was brought into existence and the services it was created to perform. The Food Administration is a war agency. Its chief purpose is the feeding of warring nations, our own nation and the Allies. All its other activities, its conservation, its stabilization of trade processes, its encouragement of production, are tributary to the one purpose of segregating stocks of food for the effective prosecution of the war. This latter purpose, in fact, takes the Food Administration directly or indirectly into the market. As the agent and correspondent of the army, the navy, the Allies, and the neutrals in the American food markets the Food Administration wields a power of

purchase which, indiscriminately handled, would amount to cornering the market.

In such a situation a double set of responsibilities arise, the responsibility toward its clients, the army, navy, and allied and neutral nations, and responsibility toward the mass of the American people, with whom, in fact, the Food Administration, in its capacity as agent, would be coming into competition and "bulling" the market. In fact, these responsibilities are one, but unless their dual nature is accepted the interests of the one or the other will soon be found to suffer. These responsibilities can be met only in case the Food Administration accepts fully the powers its commanding place in the market awards to it as opportunities for service to the producer and the consumer.

Its responsibility toward the official agencies of the war the Food Administration accepted through the establishment of a Division of Co-ordination of Purchase which works in companionship with the Federal Trade Board and the interested purchasing agencies. To each of these the Food Administration helps to allocate stocks of food; it helps further by distributing orders equitably to different trade agencies. But the Food administration cannot stop there. This is but the beginning of its service and its responsibility. Beyond the supplying of stocks to official buyers it has the far-reaching responsibility of maintaining a steady and increasing flow from the producers and of maintaining the morale and the nutrition of the mass of the population which is supporting the war. The Food Administrator had from the beginning repudiated the idea of high prices as an incentive to saving. Conservation was always possible by high prices, but this was the conservation of starvation. It was the conservation that laid its heaviest burden on those least able to bear it. Though it has not been possible to lower war-time prices to peace-time standards, the Food Administration has exerted all its force to keep prices from reflecting the abnormal pressure on the market. In striving for this end the Administration was setting aside one of the strongest instruments for enforcing saving by the ultimate consumer. Though America has not gone as far as England has gone in the matter of bread, the effort has been made to protect the worker against high prices, even to absolve certain sections of the community from some of the sacrifices demanded of their better conditioned neighbors. While this principle has been justified both here and abroad in the morale of the people, it is clear that the end so sought is not entirely

consistent with a program of universal saving of food. America has had to become accustomed to the idea that while a great proportion of our population is willing conscientiously to join the program of conservation, there are others to whom the increased wages of war-time have brought higher standards of living, who neither will nor can reasonably be expected to conserve.

LVI. Significant Phases of Control

1. CONTROL OF MEAT PACKING[1]

I. Rules for Licensees with Annual Sales Exceeding $100,000,000

ARTICLE II. REGULATION OF PROFIT

Section 3.—Ratio of profit to investment. Licensee shall so conduct his business that the annual profit of business of Class 1 shall not exceed nine per cent of the investment therein, as hereinafter defined, and that the annual profit of business of Class 2 shall not exceed fifteen per cent of the investment therein, as hereinafter defined; no limitation being placed upon the profit of business of Class 3; provided, however, that in no case shall the profit on business of Class 1 exceed the limitation based on sales provided for packing concerns having sales of less than $100,000,000 per year. The limitation of profit in the one class of business is independent of the limitation of profit in the other, and no deficiency in the profit of business of one class shall be made up by so conducting the other as to obtain an excess of profit above the limitation specified.

Provided, that licensee shall correctly segregate the investment and the profits of each branch or department of his business, and, in doing so shall be subject to the same rules as are hereinafter provided with respect to segregation between the three classes of business distinguished in Section 1.

Section 8.—Profits—How computed. In computing his profits on business of Class 1 and Class 2 for the purpose of Section 3, licensee shall observe the following regulations:

1. *Existing methods to be continued.*—Except as expressly provided in this section, or as hereafter expressly authorized or directed by the chief of the meat division, licensee shall continue to compute the profits of his business and of the several departments thereof in

[1] From United States Food Administration, Meat Division, *Rules and Regulations Relating to the Profits of Slaughtering and Meat Packing Concerns*, Chicago, 1917.

accordance with the same methods and principles as he shall have employed during the twelve-month period preceding November 1, 1917; and he shall not adopt any method or device which will conceal or understate the full and true profit thereof, or which will divert the profit properly accruing to licensee to any other person or corporation, or which will divert the profit properly attributable to business of one class to business of another class.

2. *Interest.*—No deduction shall be made from profits on account of current payments or accruals of interest on bonds, notes, bills or accounts payable, or any other interest, for payments or accruals of dividends on any class of capital stock of licensee or for provisions for sinking funds, nor shall such payments, accruals, or provisions be charged to operating expenses;

Provided, That any excess payment of interest on bonds, notes, bills or accounts payable above a rate of five per cent per annum may be charged to operating expenses, said excess to be computed on the basis of the aggregate of such indebtedness of all kinds and the aggregate interest thereon.

4. *Transfer values.*—Any material or product transferred by licensee from any department falling under one of the classes distinguished in Section 1 to a department falling under another class, or any material or product sold by licensee to or purchased by licensee from any corporation or concern in which licensee is directly or indirectly interested, shall be valued in the accounts at its true and fair market price or market value. Such price or value shall be taken as of the date of the actual physical transfer or delivery, and the time of such transfer or delivery shall continue to be fixed in accordance with the practice of licensee in the year preceding November 1, 1917, unless otherwise authorized or directed by the chief of the meat division. This same rule shall, unless otherwise authorized by the chief of the meat division, be observed in respect to materials transferred from any department to any other department.

5. *Depreciation.*—Reasonable provision for depreciation of buildings, machinery, and equipment may be deducted, but such provision shall not, except with express approval of the chief of the meat division, exceed the normal and customary provision therefor heretofore made by licensee, and the chief of the meat division reserves the right to reduce any such provision which he deems excessive.

6. *Repairs and maintenance.*—Only reasonable expenditures for repairs, renewals, and maintenance of buildings, machinery, and equipment may be charged to operating expenses, and in no case

shall additions to or improvements of such property which increase its permanent capital value be charged to operating expenses, unless by express authorization of the chief of the meat division.

11. *Salaries.*—No unreasonably large or excessive salary or other compensation or bonus paid to any officer, director, stockholder, firm member, or proprietor of licensee shall be treated as part of operating expenses.

II. Rules for Licensees with Annual Sales of Less than $100,000,000

Article II. Regulation of Profit

Section 1.—Ratio of profits to sales. Licensee shall so conduct his business that the profit thereof, or of that part thereof not expressly excluded from this limitation, shall not exceed two and one-half per cent of the gross value of sales.

Section 7.—Profits—how computed. In computing his profits for the purpose of Section 1, licensee shall observe the following regulations:

1. *Existing methods to be continued.*—Except as expressly provided in this section, or as hereafter expressly authorized or directed by the chief of the meat division, licensee shall continue to compute the profits of his business and of the several departments thereof in accordance with the same methods and principles as he shall have employed during the twelve-month period preceding November 1, 1917; and he shall not adopt any method or device which will conceal or understate the full and true profit thereof, or which will divert the profit properly accruing to licensee to any other person or corporation, or which will divert the profit properly attributable to business subject to limitations under Section 1 to business not so subject.

2. LIVE STOCK AND FEED PRICES

A[1]

We believe that definite, stimulative action is immediately necessary if the pork supply of the nation and the nation's Allies is to be sufficient to meet demands.

There is a marked feeling of uncertainty evident on the part of the producer. This is manifest in the large number of unfinished

[1] Adapted from *Report of Commission Appointed by the United States Food Administration to Investigate the Cost of Producing Hogs.* Addressed to Herbert C. Hoover, October 27, 1917.

hogs now going to market. There is a big tendency to market potential breeding stock—breeding stock that is essential to further increase. The feeling of unrest and uncertainty on the part of the producer is greatly accentuated by the recent marked drop in price of live hogs. First and above all, confidence should be instilled so that producers will feel that when their hogs are finished for market they will sell at a fair price—at least sufficient to cover the actual cost of production and a fair profit.

The Commission finds that the approximate, equivalent value of twelve bushels of No. 2 corn is necessary to produce 100 pounds of average live hog under average farm conditions.

We further believe that the equivalent value of at least 14.3 bushels of corn must be paid for 100 pounds of average hog in order that production may be stimulated 15 per cent above the normal.

The best emergency method of stabilizing the market and preventing the premature marketing of light, unfinished pigs and breeding stock, we firmly believe, is to establish immediately a minimum emergency price for good to select butcher hogs of $16 per hundred pounds on the Chicago market. For the purpose of immediately stimulating production of swine for the next year, we recommend that a ratio be immediately established and announced at once, same to go into effect February 1, 1918.

At this time 100 pounds of average hog is selling for the current equivalent value of only 7.4 bushels of corn. It is easy to see and fully comprehend why there has been a marked decrease in production and why thousands of light, immature, and unfinished hogs have been or are being rushed to market. In the periods of heavy loss, the future production of the industry is threatened.

It is the emphatic opinion of this Commission that, to secure increased production under present abnormal conditions, definite assurance of a fair price of hogs should be given to producers by the Food Administration, and that the widest possible publicity be given to whatever action is taken with reference to the hog situation.

B[1]

The questions raised in the above report involve general principles of a very far-reaching character. The policy recommended has two sides, for to stimulate pork production through a high ratio between the price of pork and the price of corn means that more

[1] An editorial.

corn is fed to hogs and less is left for human beings. Thus in order to be sure that such stimulation is wise we must be sure not only that more pork is needed but that it is needed more than the corn (and anything else having an alternative use that goes to the making of a hog) is needed for other purposes.

In order to send more wheat to the Allies the American people are required to eat more corn and other grains, but the 1917 corn crop was much of it "soft" and unmarketable. Under such circumstances we could not feed more of the good corn to people and at the same time feed more to hogs and beef cattle. Since corn is used most largely in the later stages of live-stock raising, what seems to be needed is the raising of more hogs and cattle, without attempting to fatten them to the very heavy weights. A study of cost of production in terms of corn throws light on how to stimulate corn feeding, but it needs a different kind of study to tell how to minimize corn feeding and still stimulate production as much as possible.

Prices of live stock must be high to stimulate production. If corn and other grains are to be partly diverted from live-stock feeding and used as human food, the consumer must bid against the live-stock feeder, and that means paying a high price. If the stock feeders against whom the consumer is competing have behind them a guarantee of a ratio of hog price to corn price that will make their business profitable no matter how much they pay for corn, and if the price of corn is not limited, the consumer might be forced to bid almost any amount *without in the end getting any more corn than before*, because his competitor's bidding power would be absolutely unlimited. Hence the project of a fixed ratio between corn and hogs appears unwise and will probably not be carried out.

In general, the Food Administration has given assurance that it will pay high enough prices for hogs and cattle to make production profitable, with the understanding that it does not guarantee a profit on the operation of buying in the market light animals to be fattened with corn.

3. SOME CASES OF PRICE CONTROL[1]

1. **Copper.**—The first important regulatory action of the War Industries Board was fixing the price of copper. The statement issued September 20, 1917, in regard to this action is as follows:

[1] By Charles R. Van Hise (see p. 445). Adapted from *Conservation and Regulation in the United States during the World War*. Prepared for the United States Food Administration.

After investigation by the Federal Trade Commission as to the cost of producing copper, the President has approved an agreement made by the War Industries Board with the copper producers fixing a price of twenty-three and one-half cents per pound f.o.b. New York, subject to revision after four months. Three important considerations were imposed by the board: First, that the producers would not reduce the wages now being paid, notwithstanding the reduction in the price of copper, which would involve a reduction in wages under the "sliding scale" so long in effect in the copper mines; second, the operators shall sell to the Allies and the public copper at the same price paid by the government, and will take the necessary measures, under the direction of the War Industries Board, for the distribution of the copper and to prevent it from falling into the hands of speculators who would increase the price to the public; and third, the operators pledge themselves to exert every effort necessary to keep up the production of copper to the maximum of the past, so long as the war lasts.

2. **Iron and steel.**—After prolonged conferences with the manufacturers of iron and steel, the War Industries Board and the steel men agreed on maximum prices for a number of commodities, which agreements were approved by the President.

In connection with the above, the iron and steel manufacturers have agreed to adjust the maximum prices of all iron and steel products other than those upon which prices have been agreed, to the same general standard as those which have been announced.

In fixing maximum prices it was stipulated, as in the case of copper, first, that there should be no reduction in the present rate of wages; second, that the prices above named should be made to the public and to the Allies, as well as to the government; and third, that the steel men pledge themselves to exert every effort necessary to keep up the production to the maximum of the past, as long as the war lasts.

By the secretary of the War Industries Board, Lieutenant Bingham, I am informed that the agreements entered into with regard to copper and iron are handled in the following manner:

"The Raw Materials Division of the War Industries Board has appointed a Director of Copper Supply and a Director of Steel Supply. The copper and steel interests have appointed Trade Committees who, under the supervision of the directors each in his department, allocate government orders in the various trades and use their influence

to prevent purchases being made by either department or by an individual outside of the government at prices above those agreed to by their industry.

"Should any individual or corporation sell any of the articles upon which a price has been fixed at prices above those fixed, the Trade Committee can use its influence to secure the reduction of that price to the fixed price, or if necessary can call upon the War Industries Board which, through its priority Division, can be able to bring sufficient pressure to bear on the seller to cause him to come into line. There has been very little trouble of this kind and likewise very little material sold at the prices fixed as yet, due to the fact that all producers of copper and steel were sold ahead at old prices for a considerable period."

The War Industries Board derives its power from the Council of National Defense, and that Council has no authority whatever to compel agreement in fixing prices.

In agreeing to fix lower prices than had prevailed, these men were doubtless moved by patriotic motives. However, the facts recited show that the prices to which they have agreed are such as to give them great profits beyond those which have obtained antecedent to the war, even when allowance is made for large deductions from these profits because of the excess war tax.

It should be remembered that the War Industries Board, in acting for the public in fixing prices, was obliged to take into account the shortage of steel and the necessity of the largest possible production. They were obliged to agree to a price which allows a profit sufficient for practically all of the furnaces and mills of the country to operate. Also in those industries in which there has been no governmental regulation or agreements regarding prices, profits have been much larger than before the war; and it was necessary to take this fact into account. A reduction in prices which in itself was a gain was accomplished.

While the arrangements regarding prices were amicably made, it should be remembered that the public pressure for fair prices for iron and steel was supported by the threat of legislation, at least so far as iron was concerned.

3. **Coal.**—(*a*) *Principles involved.* The Fuel Administration has the problem of fixing the price of coal sufficiently high so that there will be a large production, without going to a price that will make it possible for the very poor small mine, remote from facilities, to operate.

If the price were fixed high enough so that all of these could work, this would result in taking from the public many millions of dollars which should not be paid. The problem is to strike the nice balance which will result in the greatest benefit to the people of the United States; a price high enough so that there shall be increased production over that of previous years, but not so high as to place too heavy a burden of cost upon the people.

In fixing the prices for bituminous coal it is to be noted that a different principle has been followed from that used in connection with wheat by the Food Administration. For wheat a basis is fixed for a certain quantity of wheat at the central interior markets, and prices for other grades and for other localities depend upon well-recognized differentials due to quality and transportation. The only deviation from this principle for wheat is that of California. The price there was fixed at a higher rate than was required under these principles.

However, in the case of coal, the plan of the Fuel Administration has been to fix the price so that each operator shall receive a limited profit. Hence the price is relatively low for coal from the thick seams, easily and cheaply mined, and high for the thin and poor seams from which it is more expensive to mine.

The difficulty of the problem may be illustrated by the very small mine which under ordinary circumstances would not be able to operate. Many of these properties do not even have railroad facilities; these are known as "wagon mines." In consequence of their lack of facilities they cannot produce coal as cheaply as the larger mines with better facilities; hence if they are operated at all, it is necessary for them to receive a high price for their product, which is no better, indeed is likely to be on the average poorer, than that from the large mines.

While differences in prices exist for like products in the same districts, it has been the aim of the Fuel Administration not to make the differentials greater than necessary in order to secure a great production. The larger part of the variations in the prices announced for bituminous coals are due to difference in quality of the coal and to freight differentials.

The fact that a ton of coal from different mines having the same thermal capacity may be sold at variable prices has occasioned no especial difficulty, because there is a greater demand for coal than can be met, and consumers readily pay a price necessary to secure the coal.

The practice followed is in complete contravention to economic theories accepted before the war. If a mine were rich and conveniently located it gained a much larger profit per ton than did the poor mine badly located. The owner of the better property gained all the advantages of cheapness of operation and convenience in transportation. Even with the prices fixed this is still the situation to a considerable extent, but the effect of the price-fixing is to reduce the differences between the gains of the rich and the poor mine.

Under the fuel law another method of attack would have been possible. The law authorized the government to be the exclusive buyer and seller of the coal of the country. Had this authority been used, the coal mined would have been sold to the Fuel Administrator at a fair profit for each operator. The coal, then the property of the Fuel Administration, could have been pooled and sold at prices dependent upon its value, taking into account its thermal power, its other qualities, and its position in the country in regard to freight and demand, the prices being fixed so as to return to the Fuel Administration its cost with a sufficient amount to cover administration. Indeed, this was the plan of the Federal Trade Commission, except that the plans of the Commission went even farther and required the operation of the mines.

Had this suggested procedure been followed, the inequality of cost of the same quality of coal at the same place would have been avoided. However, the Fuel Administration would have had the extremely difficult problem of determining the cost of the production of coal at each mine, dependent as this is upon so many complex factors, including the cost of labor, reduction of the value of the mines due to extractions of material, the depreciation of permanent property, the interest on the investments, etc.

The method would also have placed upon the Fuel Administration the entire burden of apportioning and marketing the coal, a gigantic undertaking. While, therefore, the method of buying coal by the government and pooling the same might be theoretically advantageous, its difficulties were such that the alternative of price-fixing was chosen.

(*b*) *Jobbers' margins.* Operators who maintain their own sales department, whether in their own name or under a separate name, and dispose of coal directly to the dealer or consumer, shall not charge any jobber's commission. A jobber must be entirely independent of the

operator, in fact as well as in name, in order to be entitled to charge a jobber's commission.

Free coal shipped from the mines subsequent to the promulgation of the President's order fixing the price for such coal shall reach the dealer at not more than the price fixed by the President's order, plus only the prescribed jobber's commission (if the coal has been purchased through a jobber) and transportation charged.

A jobber who had already contracted to buy coal at the time of the President's order fixing the price of such coal, and who was at that time already under contract to sell the same, may fill his contract to sell at the price named therein.

(*c*) *Retail margins.* On October 1 it was ordered that the gross margins for the retailer of any size or grade of coal or coke for each class of business shall not exceed the average gross margin added by such dealer for the same size or grade for each class of business during the calendar year 1915, plus 30 per cent of said retail gross margin for the calendar year 1915; provided, however, that the retail gross margin added by any retail dealer shall in no case exceed the average added by such dealer for the same size, grade, and class of business during July, 1917. This margin is the maximum and the retailer may accept smaller margins. It gives dealers no price-incentive to conserve coal, rather to speed up their turnover and keep stocks as narrow as possible.

4. FORMS OF CONTRACTS

INTRODUCTION

This subject has received practically no attention from economists. The war is bringing it into the foreground for various reasons. (1) When perhaps one-fourth or one-third of the nation's work is being done for the government, the question becomes obviously a public one where before it had been primarily a private business affair the public importance of which it was easy to forget. (2) Forms of contracts react on the efficiency with which the work is done, and this is no longer regarded as a purely private concern of the two parties to the contract and no one else. It has become a matter of vital national interest, or rather, its national importance has been more vividly realized. (3) Forms of contract react on rates of wages and prices of materials and other goods, and these the nation is already trying to control and mold into a unified scheme.

I. NEEDS OF THE SITUATION IN THE EARLY STAGES OF WAR

War work done in the midst of rapidly rising prices and wages and general disturbance calls for forms of contracts that will,

1. Give the contractor reasonable security against big upward movement in wages and prices of materials.

2. Adapt itself to possible unforeseen changes in the amount and kind of work called for—to "extras" which may be found necessary after the contract has been placed.

3. Furnish an incentive to reasonable economy—an incentive of a sort that shall (*a*) stop short of putting the contractor under undue pressure to skimp in ways that might injure the quality of his work; (*b*) be independent of competitive bidding; (*c*) be automatic in its action and not dependent on government oversight to check waste.

The first requirement needs no explanation. It calls for some form of contract which assures the contractor that all his costs will at least be covered, in all cases where they cannot be (*a*) foreseen with reasonable accuracy; (*b*) prevented from changing by the contractor getting options on materials or buying them in advance; (*c*) prevented from changing by public control of wages and prices; (*d*) compensated for in some other way.

The second requirement may be met by fixing unit prices for all the different sorts of work that are called for, and adding prices for possible extras so far as it can be foreseen that contingencies may arise in which they will be called for. For any work not covered by the lists of possible extras, terms could be left open, to be adjusted on a reasonable basis as the contingency might arise. Such a method as this, however, can be satisfactory only to the extent that disturbances of prices and wages have been adequately taken care of in some other way.

The third requirement, that of a reasonable incentive to economy, is of crucial importance. (*a*) Lump-sum contracts may give an undue incentive to parsimony in doing the work, and where this cannot be adequately checked by inspections and tests, this form of contract may lead to harmful results. This is especially true when unforeseen changes in costs put the contractor in danger of making an absolute loss, for a man will give short measure to avoid a loss when he would scorn to do so merely to increase his profits. If the margin has been cut very fine in competitive bidding the danger is increased, this being one of the bad results of fixing a competitive price on something that is not yet made, so that its quality is still to be determined within

limits set by specifications and inspection. Even where the contractor is in no danger of absolute loss he still pockets the entire amount saved by economy or by parsimony.

The first Quebec Bridge, which fell in 1907, was built under this form of contract, and the members were made so light that engineers were astounded when the strain sheet was made public. The investigating commission found that the bridge would have had to be condemned, even if it had not collapsed during construction. Where the lives, health, and safety of soldiers, sailors, and workmen depend on the thoroughness with which work is done, builders and manufacturers must be liberal in the essentials of quality and contracts must be so drawn that they can afford to be. The specifications for government work are not and cannot be made so infallible and prophetic as to provide for everything, and if they *could*, inspection would still be fallible.

Under a fixed-price contract the contractor is under no great stimulus to let the quality of his work exceed the letter of the requirements. If he does, the expense is so much loss to him. This contract is best suited to thoroughly standardized articles which do not take too long to make, so that prices can be revised for the future, if conditions require it, without making the revision retroactive on the one hand, or on the other hand causing the contractor serious loss.

(*b*) Competitive bidding is the common method of seeing that the government gets some benefit out of the cheapness with which work is done under a lump-sum or a fixed-unit-price contract. Under very disturbed conditions this does not work well, for two main reasons, of which the government officials seem to be well aware. Such bidding leads each competing contractor to try to secure an option on materials and thus creates a demand for options out of all proportion to the actual demand for goods from which it arises. This tends to inflate prices unnecessarily. So far as the contractor cannot protect himself against rising prices by getting options, he must seek protection in his bid. He cannot afford to bid as low as if every contract were sure to net exactly the average profit, because (if he is financially responsible) an absolute loss will hurt him more than a profit of the same amount will help him. Those who have to do with contracts say that under such conditions the bids are so high that the work is made more expensive by this form of competition.

(*c*) If the form of contract does not in itself furnish an incentive to economy it is hard for government inspection to bring it about

directly and maintain the quality of products. If glaring cases of disorganization, padded payrolls, or lack of obvious business method and system are found, something can be done, but in the early stages of putting a peaceful and individualistic democracy on a war footing, conditions are so confused that methods of production cannot be standardized beyond a certain elementary minimum. For economy beyond this minimum reliance must be put, largely, either on patriotism or on a financial incentive or on both together.

II. FORM OF CONTRACT ADAPTED TO THESE NEEDS: A SIMPLE BASIS FOR ECONOMY-SHARING CONTRACTS

The simplest way to meet the difficulty of rising prices and wages is by some form of cost-plus contract. At present those interested in contracting are advocating the increased use of such contracts, largely for this reason, but also because of dissatisfaction with the results of competitive bidding on fixed-price contracts. If such a contract is combined with an economy-sharing feature, it will furnish a stimulus to economy without carrying it to such unhealthy lengths as does a system under which the contractor runs a serious risk of not covering his actual expenses. Such an incentive to economy has the special advantage that it does not depend in any way on competitive bidding, though competitive bidding may be used, if desired, without forcing the contractors to get options ahead in order to protect their costs and so inflating the costs unnecessarily in the way already mentioned. The simplest basis for such a contract would be this: the contractor should receive his costs, plus some fraction, say one-third, of the amount by which cost falls short of an agreed sum, but in no case less than a specified minimum lump sum in excess of cost. This has been recommended by the United States Department of Commerce.

III. COST-PLUS-LUMP-SUM CONTRACTS

Many government contracts appear to have been let on this basis. While not affording a positive incentive to economy, it avoids offering a positive incentive to waste. The United States Department of Commerce, in recommending this form of contract, urges that it be combined with the economy-sharing feature.

IV. CONTRACTS SUBJECT TO REVISION

It is possible to let a contract without specifying the price, leaving this to be determined later. Or contracts can be let at a specified price subject to revision in case conditions change so as to call for it.

Where the contractor has confidence in the reasonableness of the government's agents, such contracts may work well. The spirit of co-operation which prevails in many quarters is probably an adequate basis on which to make many contracts of this kind, but they cannot meet all cases.

V. COST-PLUS-PERCENTAGE CONTRACTS

The basic disadvantage of such contracts is obvious—the more the work costs, the bigger are the profits. This is clearly against all business principles, and is never really necessary, no matter what the character of the work. If the contractor is patriotic enough to want to see government work done as efficiently and economically as possible, such a contract puts his patriotism at war with his pocket-book and makes it cost him money to indulge in that virtue. It implies no slur on the patriotism of contractors to wish to see it relieved of this burden.

The profits on such a contract can be increased in many ways:

1. By padding the salary roll. This has been charged more than once.

2. By yielding to demands for increased wages. Hence every holder of such a contract becomes fair game for such demands. It is not easy to refuse a man what costs you less than nothing. It has been noted that the letting of such contracts is the signal for demands from all concerned.

3. By encouraging labor to demand more than it otherwise would have demanded. Some observers have thought they detected a more than ordinarily sympathetic attitude of employers toward the employees in the matter of the outcome of wage awards.

4. By limiting the output of labor. This is said to have been done by action of the employer under a cost-plus-percentage contract.

5. By paying liberal prices for materials.

6. By wasteful use of materials.

7. By hiring an unnecessarily large working force, both salaried staff and wage earners.

8. By accepting poor material, causing increased costs in working it.

9. By inadequate maintenance or operation of parts of the equipment, leaving the worker with an imperfect machine or tool to work with (e.g., if air-pressure for pneumatic riveters were to fall below normal for some reason it might be a source of profit rather than of loss).

10. By holding railroad cars and accumulating unnecessary demurrage charges.

11. Even wasteful routing of freight, heinous as that seems under present conditions, *would be a profitable policy* under this form of contract.

There is no justification for putting contractors at such a disadvantage in their attempts to secure reasonable terms from labor unions and sellers of materials; neither does the patriotism of the majority justify using a form of contract under which the minority can profit by policies running all the way from positive fraud and collusion in swelling expenses to such impalpable things as failure to use the utmost vigilance and system in organizing the work and in keeping the inevitable wastes of such work down to the lowest practicable level.

VI. CONCLUSION

Different kinds of contracts will always be suited to different kinds of work, and no one form that would be best for all purposes can be selected. The fixed-price form is the simplest, and to the extent that the government succeeds in stabilizing wages and the prices of metals and other basic materials, this form of contract becomes easier to use, especially if the manufacturers themselves are getting their methods standardized and their costs in labor and materials reasonably uniform and predictable.

XII

LABOR AND THE WAR

Introduction

It has become increasingly clear, as the war has been prolonged, that the issue of the conflict largely rests in the hands of the humble toiler back of the lines—every phase of military effort being fundamentally dependent upon the whole-hearted support of labor. The laboring man himself was one of the first to learn this lesson, and with ever-growing confidence he has raised his head and spoken with a new-found dignity. And more and more the responsible governments of the world have harkened to the voice of labor in the counsels of nations. It is now a common saying that the war has meant the emancipation of labor and that we have already entered upon a new era of industrial democracy.

The selections in this chapter touch only the high spots in the relationship of labor to the war. The first section is designed to indicate the task that confronted non-militaristic countries at the outbreak of the war in enlisting the support of labor. Internationalists, syndicalists, pacifists, anti-imperialists, what not, had to be taught that the purpose of the Allies in this struggle was not ignoble, but one that was in accord with the rights and the aspirations of common men everywhere. The second section shows the nature of the problems that arise in connection with the effective mobilization of man power. And the third division of the chapter discusses the conditions that surround labor in war time, together with the policies that are being formulated to deal with these conditions as they arise.

Whatever be the ultimate results of labor's newly acquired position, it is certainly not too much to say that we shall never go back to the chaotic conditions that prevailed before the war. Many of the agencies and policies that have been born of the war will become permanent. And on every hand there is evidence of a new conception of industrial relations—a conception that is forward looking, that recognizes that ill-balanced social development is incompatible with democratic institutions.

LVII. Attitude of Labor toward the War

1. THE REAL PACIFISM BEFORE THE WAR[1]

I have reserved for myself the interesting task of presenting to you our anti-patriotic conception called "Herveism." My rôle has been limited to interpreting the ideas and sentiments which I have seen spring up among the proletarian and peasant class, and of which I have only been the doctrinaire, the theorizer, and latterly, in spite of myself, the standard-bearer and symbol.

These anti-patriotic ideas, moreover, are somewhat new among the masses of organized workers. And like all new ideas, they shock public opinion; they seem shocking to you. That was the fate of early Christianity, and also of the republican idea, at the time when republicans were regarded, in the remotest parts of the country, as monsters gorged with blood.

At an age when the critical spirit is not yet developed in us, we hear, as children at the family table, accounts of horrible misdeeds committed by the Germans or the English, or feats of valor accomplished by the French. The little Germans at the same moment hear about all sorts of crimes committed by the French, the English, or the Russians.

We are taught that France is the land of the brave, the country of generosity and chivalry, and the refuge of liberty; the same things are said of their countries to the little Germans, the little Russians, and the little Japanese; and we all, in the innocence of our hearts, believe them.

For New Year's gifts our fathers, and even our mothers, give us lead soldiers, toy guns, drums, clarions, and trumpets.

And when this beautiful education has already made us patriots in embryo, the school—the secular public school quite as much as the schools of the religious orders—puts the finishing touch to the work of driving patriotism into our heads. Do you remember those history manuals in which on every page some scene of carnage or the portrait of some warrior was cynically displayed? To complete the work of making the perfect patriot, to poison his whole system, nothing more

[1] By Gustave Herve. The speech from which the excerpts here presented are taken was translated from French into English and circulated in this country by the I.W.W. as early as 1912.

Ed. Note.—This selection reveals an attitude toward all war that had been steadily growing among revolutionary groups in recent times.

is necessary than to let him become intoxicated with military pomp, which is still more impressive than the pomp of religion. This time the impression is not produced by priestly vestments, resplendent with gold and precious stones; these are replaced by costumes of gaudy colors, with gold lace, plumes, and feathers.

The music of the church organs is replaced by the still more intoxicating music of drums and trumpets.

Instead of religious processions, we now have those imposing military reviews, which we have all run after in our time in order to see the march past, in the heat and dust, of those interminable ranks of instruments of slaughter and of young men, the flower of the nation, marked for future butcheries. Then, when the rag on the end of a stick, which represents the sacred emblem of the country, passes by, a wave of religious emotion passes over the throng of patriots, and they devoutly bare their heads, just as their great-grandfathers bared their heads before the Holy Sacrament.

As for us, the revolutionary socialists, we have repudiated the flag on which are displayed in letters of gold the names of so many butcheries.

Flags are only emblems; they have no value beyond what they represent. What, then, do we mean by a country or a nation? What are all the countries of today?

Allow me, gentlemen of the jury, to make use of an illustration, a sort of parable, which will enable you better to understand our sentiments.

Countries—all countries or nations whatever may be the government ticket with which they are labeled—are composed of two groups of men, one by far the less numerous, the other embracing the immense majority of the people.

The first group is seated at a well-spread table, where nothing is lacking. At the head of the table, at the place of honor, are seated the great financiers. Some are Jews, yes; others are Catholics; others, again, are Protestants or Freethinkers. They may be in disagreement on religious or philosophic questions, and even on questions of interest, but, as against the great mass of the people they work together like thieves at a fair.

On their right and on their left are the cabinet ministers, the great officials of all the state services—civil, religious, and military—not forgetting the paymaster-generals, at salaries of thirty, forty, or sixty thousand francs a year; a little farther away the Council of

the Order of Advocates and the gentlemen of the courts of law, including their precious auxiliaries, the solicitors, notaries, and bailiffs.

And then there are the big shareholders of the mines, factories, railways, and shipping companies, and the big stores, great squires and great landed proprietors, they are all at that table; all those who have only a few sous are there also, at the end of the table; they are the small fry, who have, however, all the prejudices and all the conservative instincts of the big capitalists.

Far away from that table I perceive a herd of beasts of burden, condemned to forbidding, dirty, dangerous, and mindless toil, without respite or repose, and, above all, without security for the morrow; small tradesmen, nailed to their counters on Sundays and holidays, and more and more crushed out every day by the competition of the big stores; small industrial employers, ground out of existence by the competition of the big factory owners; small peasant proprietors, brutalized by long hours of labor, sixteen to eighteen hours a day, and only working to enrich the big middlemen, flour merchants, wine agents, and sugar refiners. Still farther off from the table of the prosperous I see the great mass of the proletarians, those who for their whole fortune have only their arms and their brains—working men and women of the factory, exposed to long periods of unemployment; petty officials, clerks, and other employes, obliged to bow their heads and hide their opinions; domestic servants of both sexes, flesh for toil, flesh for cannon, flesh for lust.

Behold your countries!

Monstrous social inequality, monstrous exploitation of man by man; that is what a country is nowadays, and that is what the workers take off their hats to when the flag is carried by.

If tomorrow your financiers and your diplomats were unable to come to terms with those of Germany, your patriotism (at 8 per cent!) would be only too happy to see us, the French and German workers, marching against each other, butchering each other by the hundred thousand, in order to find out whether Morocco should belong to the capitalists of Paris or to those of Berlin.

We know, as you see, the mysterious and interested sources of your patriotism. Yes, you are quite right, from your point of view, in trying to cultivate among the enslaved workers the worship of your countries and of your flags; to maintain the domination of your class you are well-advised in propagating among the masses these patriotic sentiments which veil class antagonisms and make the sheep believe

that they are of the same race, the same family, and the same country as the wolves who devour them.

For us there are only two countries in the world—that of the privileged and that of the disinherited, or rather that of the conservatives and that of the rebels, whatever language they may speak, or whatever the land may be which chanced to give them birth. Our compatriots are not the capitalists here, who would have us massacred if they could, just as they massacred our fathers in the Commune. Our compatriots are the conscious proletarians, the socialists, the revolutionaries of the whole world, who wage everywhere the same battle as ourselves for the establishment of a better society. And in full agreement with them we only await the opportunity in this Europe, where the railways, the telegraph, cheap newspapers, and the same capitalist system have suppressed distance and rendered uniform the conditions of life, to found that free European federation, prelude to the great human federation in which the countries of today will be absorbed, just as the ancient provinces became absorbed in the France, England, and Germany as we know them now.

2. ATTITUDE ON THE EVE OF HOSTILITIES[1]

A. MANIFESTO TO THE BRITISH PEOPLE[2]

The long-threatened European war is now upon us. For more than one hundred years no such danger has confronted civilization. It is for you to take full account of the desperate situation and to act promptly and vigorously in the interest of peace. You have never been consulted about the war.

Whatever may be the rights and wrongs of the sudden, crushing attack made by the militarist Empire of Austria upon Servia, it is certain that the workers of all countries likely to be drawn into the conflict must strain every nerve to prevent their governments from committing them to war.

Everywhere Socialists and the organized forces of labour are taking this course. Everywhere vehement protests are made against the greed and intrigues of militarists and armament-mongers.

[1] Ed. Note.—These selections, consisting of manifestoes and opinions, have been compiled by G. D. H. Cole, in *Labour in War Time*, pp. 24–59. Published by G. Bell and Sons, Ltd., London, 1915. The authorities for the statements are duly indicated.

[2] Issued August 1, 1914, by the British Section of the International Socialist Bureau.

We call upon you to do the same here in Great Britain upon an even more impressive scale. Hold vast demonstrations against war in every industrial center. Compel those of the governing class and their press who are eager to commit you to co-operate with Russian despotism to keep silence and respect the decision of the overwhelming majority of the people, who will have neither part nor lot in such infamy. The success of Russia at the present day would be a curse to the world.

There is no time to lose. Already, by secret agreements and understandings, of which the democracies of the civilized world know only by rumour, steps are being taken which may fling us all into the fray.

Workers, stand together therefore for peace! Combine and conquer the militarist enemy and the self-seeking Imperialists to-day, once and for all.

Men and women of Britain, you have now an unexampled opportunity of rendering a magnificent service to humanity, and to the world!

Proclaim that for you the days of plunder and butchery have gone by; send messages of peace and fraternity to your fellows who have less liberty than you. Down with class rule. Down with the rule of brute force. Down with war. Up with the peaceful rule of the people.

[*Signed on behalf of the British Section of the International Socialist Bureau*]

J. Keir Hardie
Arthur Henderson

B. THE VOICE OF THE CROWD[1]

That this demonstration, representing the organized workers and citizens of London, views with serious alarm the prospects of a European war, into which every European power will be dragged owing to secret alliances and understandings which in their origin were never sanctioned by the nations, nor are even now communicated to them; we stand by the efforts of the International Working Class Movement to unite the workers of the nations concerned in their efforts to prevent their governments from entering upon war, as expressed in the resolution passed by the International Socialist

[1] Resolutions adopted with enthusiasm at an anti-war mass-meeting in Trafalgar Square, August 2, 1914.

Bureau; we protest against any step being taken by the government of this country to support Russia, either directly or in consequence of any understanding with France, as being not only offensive to the political traditions of the country but disastrous to Europe; and declare that as we have no interest, direct or indirect, in the threatened quarrels which may result from the action of Austria in Servia, the government of Great Britain should rigidly decline to engage in war, but should confine itself to efforts to bring about peace as speedily as possible.

C. LABOR OFFICIALLY SPEAKS[1]

August 7, 1914

DEAR SIR: We beg to inform you that a special meeting of the national executive of the Labour Party was held on August 5 and 6 to consider the European crisis, when it was decided to forward to each of the affiliated organizations the following resolutions:

That the conflict between the nations of Europe in which this country is involved is owing to Foreign Ministers pursuing diplomatic policies for the purpose of maintaining a balance of power; that our own national policy of understandings with France and Russia only was bound to increase the power of Russia both in Europe and Asia, and to endanger good relations with Germany.

That Sir Edward Grey, as proved by the facts which he gave to the House of Commons, committed, without the knowledge of our people, the honour of the country to supporting France in the event of any war in which she was seriously involved, and gave definite assurances of support before the House of Commons had any chance of considering the matter.

That the Labour movement reiterates the fact that it has opposed the policy which has produced the war, and that its duty is now to secure peace at the earliest possible moment on such conditions as will provide the best opportunities for the re-establishment of amicable feelings between the workers of Europe.

That without in any way receding from the position that the Labour movement has taken in opposition to our engaging in a European war, the executive of the party advises that, while watching for the earliest opportunity for taking effective action in the interests of peace and the re-establishment of good feeling between the workers

[1] A letter of the Executive Committee of the Labour Party, containing resolutions passed by the Committee.

of the European nations, all Labour and Socialist organizations concentrate their energies meantime upon the task of carrying out the resolutions passed at the Conference of Labour organizations held at the House of Commons on August 5, detailing measures to be taken to mitigate the destitution which will inevitably overtake our working people while the state of war lasts."

[*Signed*]

W. C. Anderson, *Chairman*
Arthur Henderson, *Secretary*

D. THE WAR MUST BE FOUGHT[1]

My dear Mr. Mayor:

I am very sorry indeed that I cannot be with you on Friday. My opinions regarding the causes of the war are pretty well known, except in so far as they have been misrepresented; but we are in it. It will work itself out now. Might and spirit will win, and incalculable political and social consequences will follow upon victory.

Victory, therefore, must be ours. England is not played out. Her mission is not accomplished. She can, if she would, take the place of esteemed honour among the democracies of the world, and if peace is to come with the healing on her wings, the democracies of Europe must be her guardians. There should be no doubt about that.

Well, we cannot go back, nor can we turn to the right or to the left. We must go straight through. History will, in due time, apportion the praise and the blame, but the young men of the country must, for the moment, settle the immediate issue of victory. Let them do it in the spirit of the brave men who have crowned our country with honour in the times that are gone. Whoever may be in the wrong, men so inspired will be in the right. The quarrel was not of the people, but the end of it will be the lives and liberties of the people.

Should an opportunity arise to enable me to appeal to the pure love of country—which I know is a precious sentiment in all our hearts, keeping it clear of thoughts which I believe to be alien to real patriotism—I shall gladly take that opportunity. If need be I shall make it for myself. I want the serious men of the Trade Union, the Brotherhood, and similar movements to face their duty. To such men it is enough to say "England has need of you"; to say it in the right way.

[1] A letter by Mr. MacDonald, who, because of "disagreement with some of his colleagues on certain aspects of the European crisis," resigned the leadership of the Labour Party during the crisis. The letter is dated September 11, 1914.

They will gather to her aid. They will protect her, and when the war is over they will see to it that the policies and conditions that make it will go like the mists of a plague and the shadows of a pestilence.

Yours very sincerely,

J. RAMSAY MACDONALD

E. MANIFESTO TO THE TRADE UNIONISTS OF THE COUNTRY[1]

GENTLEMEN:

The Trade Union Congress Parliamentary Committee, at their meeting held yesterday, had under consideration the serious position created by the European war and the duty which Trade Unionists, in common with the community in general, owe to themselves and the country of which they are citizens.

They were especially gratified at the manner in which the Labour Party in the House of Commons had responded to the appeal made to all political parties to give their co-operation in securing the enlistment of men to defend the interests of their country, and heartily indorse the appointment upon the Parliamentary Recruiting Committee of four members of the party, and the placing of the services of the national agent at the disposal of that committee to assist in carrying through its secretarial work.

The Parliamentary Committee are convinced that one important factor in the present European struggle has to be borne in mind, so far as our own country is concerned—namely, that in the event of the voluntary system of military service failing the country in this its time of need, the demand for a national system of compulsory military service will not only be made with redoubled vigour, but may prove to be so persistent and strong as to become irresistible. The prospect of having to face conscription, with its permanent and heavy burden upon the financial resources of the country, and its equally burdensome effect upon nearly the whole of its industries, should in itself stimulate the manhood of the nation to come forward in its defence, and thereby demonstrate to the world that a free people can rise to the supreme heights of a great sacrifice without the whip of conscription.

Another factor to be remembered in this crisis of our nation's history, and most important of all so far as Trade Unionists and Labour in general are concerned, is the fact that upon the result of

[1] Issued at the beginning of September, 1914.

the struggle in which this country is now engaged rest the preservation and maintenance of free and unfettered democratic government, which in its international relationships has in the past been recognized, and must unquestionably in the future prove to be the best guarantee for the preservation of the peace of the world.

The mere contemplation of the overbearing and brutal methods to which people have to submit under a government controlled by a military autocracy—living, as it were, continuously under the threat and shadow of war—should be sufficient to arouse the enthusiasm of the nation in resisting any attempt to impose similar conditions upon countries at present free from military despotism.

Long life to the free institutions of all democratically governed countries!

Yours faithfully,

THE PARLIAMENTARY COMMITTEE

F. THE ACCEPTANCE OF WAR[1]

The British Labour movement has always stood for peace. During the last decade it has made special efforts to promote friendly relations between the peoples of Great Britain and Germany. Deputations of Labour representatives have taken messages of goodwill across the North Sea despite the obstacles to international working-class solidarity which existed. In turn, German Labour leaders on similar missions have been welcomed in this country by organised workers. A strong hope was beginning to dawn that out of this intercourse would grow a permanent peaceful understanding between the two nations.

But this hope has been destroyed, at least for a time, by the deliberate act of the ruler of the military Empire of Germany. The refusal of Germany to the proposal made by England that a conference of the European powers should deal with the dispute between Austria and Servia, the peremptory domineering ultimatum to Russia, and the rapid preparations to invade France, all indicate that the German military caste was determined on war if the rest of Europe

[1] This manifesto was issued October 15, 1914, "to clear away once and for all misconceptions which have been circulated as to the attitude of the British Labour movement." "It was signed by most of the Labour Members of Parliament, by the Parliamentary Committee of the Trades Union Congress, by the Management Committee of the General Federation of Trade Unions, and by other Labour Leaders."—G. D. H. Cole, *op. cit.*, p. 55.

could not be cowed into submission by other means. The wanton violation of the neutrality of Belgium was proof that nothing, not even national honour and good faith, was to stand between Germany and the realisation of its ambitions to become the dominant military power of Europe, with the kaiser the dictator over all.

The Labour Party in the House of Commons, face to face with this situation, recognised that Great Britain, having exhausted the resources of peaceful diplomacy, was bound in honour, as well as by treaty, to resist by arms the aggression of Germany. The party realised that if England had not kept her pledges to Belgium, and had stood aside, the victory of the German army would have been probable, and the victory of Germany would mean the death of democracy in Europe.

Working-class aspirations for greater political and economic power would be checked, thwarted, and crushed, as they have been in the German Empire. Democratic ideas cannot thrive in a state where militarism is dominant; and the military state with a subservient and powerless working class is the avowed political ideal of the German ruling caste.

The Labour Party, therefore, as representing the most democratic elements in the British nation, has given its support in Parliament to the measure necessary to enable this country to carry on the struggle effectively. It has joined in the task of raising an army large enough to meet the national need by taking active part in the recruiting campaign organised by the various Parliamentary parties. Members of the party have addressed numerous meetings throughout the country for this purpose, and the central machinery of the party has been placed at the service of the recruiting campaign. This action has been heartily endorsed by the Parliamentary Committee of the Trades Union Congress, which represents the overwhelming majority of the Trade Unionists of the country. The Committee, in a manifesto on the war, states:

"The mere contemplation of the overbearing and brutal methods to which people have to submit under a government controlled by a military autocracy—living, as it were, continuously under the threat and shadow of war—should be sufficient to arouse the enthusiasm of the nation in resisting any attempt to impose similar conditions upon countries at present free from military despotism."

The policy of the British Labour movement has been dictated by a fervent desire to save Great Britain and Europe from the evils that

would follow the triumph of military despotism. Until the power which has pillaged and outraged Belgium and the Belgians, and plunged nearly the whole of Europe into the awful misery, suffering, and horror of war, is beaten, there can be no peace. While the conflict lasts England must be sustained both without and within; combatants and non-combatants must be supported to the utmost. The Labour movement has done and is doing its part in this paramount national duty, confident that the brutal doctrine and methods of German militarism will fail. When the time comes to discuss the terms of peace the Labour movement will stand, as it always has stood, for an international agreement among all civilised nations that disputes and misunderstandings in the future shall be settled, not by machine guns, but by arbitration.

3. THE ATTITUDE OF AMERICAN LABOR

A. THE WAR A LABORER'S WAR[1]

There have been some of our people here and there who have asserted that this is a capitalists' war, that it is a Wall Street war, that it is a munitions manufacturers' war. I wonder if those people have stopped to examine the policy that has been pursued by the government since war was declared, and before it was declared, before they made utterances of that kind. If this is a capitalists' war, then it follows that the administration at Washington—Congress and the President—have been dominated by capitalism, and, if they were dominated by capitalism in declaring war, it would follow that they would be dominated by capitalism in pursuing the war. And yet, what are the facts?

Instead of permitting the capital of the country to secure profits at will, one of the first powers granted to the war administration was to fix the prices at which capitalists should sell the products of labor—the selling price of coal at the mines was fixed, the price of wheat was fixed, the prices of certain metal products were fixed, the price of copper was fixed; but in no instance has there been any attempt on the part of the administration to fix the maximum price that should be paid for labor. And when it came to fixing the price of copper at $23\frac{1}{2}$ cents per pound the only stipulation that was included by the War Industries Board handling the proposition was that the fixing

[1] By William B. Wilson. From *Labor's Relation to the World War*, pp. 7–8. Published by the United States Department of Labor.

Ed. Note.—Mr. Wilson is the Secretary of Labor in the present administration.

of the price at 23½ cents per pound must not result in the lowering of the rate of wages that was established under the former prices. And yet there are people who, in the face of these facts and hundreds more that I might cite if I would take the time, want to intimate that this is a capitalists' war, a Wall Street war, and a war of the munitions manufacturers. My friends, this is a war of the people of the United States for the preservation of their institutions. And for the purpose of preserving these institutions we are gathering together armies. We are sending the flower of our youth into the training camps and over the seas into France to protect those who remain at home.

During the past decade the sentiment of American labor has crystallized against resort to arms as a means of settlement of disputes between nations. War had come to be considered wasteful economically, socially, and morally. Labor felt that no national advantage gained through force of arms could offset the human life sacrificed, the burden of taxation levied upon successive generations to pay the cost of war, the standards of life set back or destroyed, which had to be rebuilt slowly and with infinite sacrifice. In short, war had come to be looked upon as morally wrong, entirely unnecessary, a calamity that could be avoided and must be avoided if the race was to progress. This feeling was shared to a greater or lesser extent by the workers of all civilized nations, and there was a universal feeling in world labor ranks prior to the outbreak of the European war that this sentiment, shared by many thoughtful people outside the ranks of the wage workers in all civilized nations, was strong enough to prevent any armed conflict which would involve any number of peoples. This sentiment was undoubtedly responsible for the lack of military preparedness, in the sense that Germany prepared, among the other major powers now engaged in the world-conflict.

When the war clouds broke in Europe, American labor was stunned. All its preconceived notions as to the inability of any great nation to wage war upon another nation because the working people would refuse either to fight or produce munitions and supplies of war were shattered when nation after nation quickly mobilized its armies and the organized-labor movements of each country, without exception, quickly pledged their men and their resources to the support of their respective governments. But the fact that America itself might be drawn into the world-conflict was still foreign to the mind of the American workman. While American labor grieved over the fate which had befallen its kind in Europe no sense of danger to this

country was apparent. From the beginning of this Republic it had been our national policy to hold aloof from the quarrels of the Old World. The splendid isolation of thousands of miles of ocean protected us. We had no quarrel with Europe and we asked but to be let alone. We stood upon our rights to protect the people of continental America from invasion or aggression as enunicated by the Monroe doctrine, and further than that we could not see that the European conflict embroiled us as a nation. Let Europe settle her own family quarrel. We were to remain the one great neutral nation of the earth. When the time came America, untrammeled by participation in the conflict, with no desire for American aggrandisement or territorial expansion, would be the natural messenger of peace to war-worried Europe.

For a considerable time the feeling has been prevalent in this country that all wars were fought in the interests of the capitalist class; that labor had everything to lose and nothing to gain by engaging in war. This sentiment has obtained not alone among the laboring classes but among a large element of independent thinkers outside of labor's ranks. When America entered the world-war the sentiment was freely expressed that Wall Street, being heavily involved in loans to the allied European nations, and feeling the war going in favor of the central powers, had plunged this government into the conflict to assure victory to the allied forces and thus secure the collection of their loans to the Allies. The sentiment was echoed and re-echoed upon the public rostrum and upon the street, in all sincerity upon the part of many, in the shallowest hypocrisy upon the part of the agents of Germany, who saw in the propaganda an effective argument in the program of dissension among American workers. A little calm reflection ought to convince every thinking person that American capital had most to gain by keeping the United States out of the war.

Before we entered the war there was no governmental restriction upon war profits in this country. Europe was at its wits' end for supplies and turned to the United States, the greatest manufacturing country on earth. Price was no object if the American manufacturers could deliver the goods in record time. There was profiteering in those days and on a tremendous scale. When America entered the war things changed. It would be an insult to your intelligence to say that profiteering has ceased, for it has not, but it has tremendously decreased. Governmental price fixing is still in its initial stages. The

process is slow because we little realize the tremendous ramifications of American industry, all the complex factors that enter into cost of production in our great industrial system. The United States Government wishes no manufacturing or supplying concern to run at a loss, nor does it want the worker robbed of his rightful share. It takes time and careful, scientific study to determine all the elements in cost of production and determine a selling cost that will be fair to all, but that is the policy of the government in its program of price fixing of commodities needed in war prosecution and the sustenance of the American people on a decent living basis.

It is worthy of note that in not a single instance in this country has the government attempted to say what should be the maximum price of wages. In every instance where a wage dispute has existed in a war industry the government, if called into the dispute, has used patience in inquiring into the nature of the dispute and has endeavored to adjust the controversy on a basis acceptable to the workers involved.

B. A DECLARATION OF PRINCIPLES[1]

The American Alliance for Labor and Democracy in its first national conference declares its unswerving adherence to the cause of democracy, now assailed by the forces of autocracy and militarism. As labor unionists, social reformers, and Socialists we pledge our loyal support and service to the United States Government and its Allies in the present world conflict.

We declare that the one overshadowing issue is the preservation of democracy. Either democracy will endure and men will be free, or autocracy will triumph and the race will be enslaved. On this prime issue we take our stand. We declare that the great war must be fought to a decisive result; that until autocracy is defeated there can be no hope of an honorable peace, and that to compromise the issue is only to sow the seed for bloodier and more devastating wars in the future.

We declare our abhorrence of war and our devotion to the cause of peace. But we recognize that there are evils greater and more intolerable than those of war. We declare that war waged for evil ends must be met by war waged for altruistic ends. A peace bought by the surrender of every principle vital to democracy is no peace, but

[1] Adopted unanimously by the American Alliance for Labor and Democracy at its first national conference at Minneapolis, September 5–7, 1917.

shameful servility. Our nation has not sought this war. As a people, we desired peace for its own sake, and we held fast to our traditional principle of keeping aloof from the political affairs of Europe. Our President, with a forbearance and a patience which some of us thought extreme, exhausted every honorable means in behalf of peace; and the declaration of war came only after many months of futile efforts to avoid a conflict. This war, so relentlessly forced upon us, must now be made the means of insuring a world-wide and permanent peace.

We declare that in this crisis the one fundamental need is unity of action. The successful prosecution of the war requires that all the energies of our people be concentrated to a common purpose. After more than two years of exhaustive deliberation, in which every phase of our relation to the great world-problem has been thoroughly debated, the constitutional representatives of the people declared the nation's will. Loyalty to the people demands that all acquiesce in that decision and render the government every service in their power.

We strongly denounce the words and actions of those enemies of the Republic who, falsely assuming to speak in the name of labor and democracy, are now ceaselessly striving to obstruct the operations of the government's purposes. In traducing the character of the President and of his advisers, in stealthily attempting to incite sedition, and in openly or impliedly counseling resistance to the enforcement of laws enacted for the National Defense, they abuse the rights of free speech, free assemblage, and a free press. In the name of liberty they encourage anarchy, in the name of democracy they strive to defeat the will of the majority, and in the name of humanity they render every possible comfort to the brutal Prussian autocracy. If the sinister counsels of these persons were followed, labor would be reduced to subjection and democracy would be obliterated from the earth. We declare that the betrayal of one's fellow-workers during a strike finds its exact counterpart in the betrayal of one's fellow-citizens in time of war, and that both are offenses which deserve the detestation of mankind.

This war, which on our part is waged for the preservation of democracy, has already set in motion vast forces for the furtherance and extension of democracy. Revolutionary changes have been made —changes which reveal the power and determination of a democratic people to control its own economic life for the common good. We

declare that peace shall not be another name for reaction, but that the gains thus far made for labor should be maintained in perpetuity.

We declare that industrial enterprises should be the servants and not the masters of the people; and that in cases where differences between owners and workers threaten a discontinuance of production necessary for the war, the government should assume complete control of such industries and operate them for the exclusive benefit of the people.

We declare that the government should take prompt action with regard to the speculative interests which, expecially during the war, have done so much to enhance prices of the necessaries of life. To increase the food supply and to lower prices the government should commandeer all land necessary for public purposes and should tax idle land in private possession on its full rental value.

We declare that the right of the wage earners to collective action is the fundamental condition which gives opportunity for economic freedom and makes possible the betterment of the workers' condition. The recognition already given to this principle should be extended and made the basis of all relationships, direct or indirect, between the government and wage earners engaged in activities connected with the war.

We declare that the wage earners must have a voice in determining the conditions under which they are to give service, and that the voluntary institutions that have organized the industrial, commercial, and transportation workers in time of peace shall be unhampered in the exercise of their recognized function during the war—that labor shall be adequately represented in all the councils authorized to conduct the war and in the commission selected to negotiate terms of peace.

Believing that the material interests of the nation's soldiers and sailors and of their dependents should be withdrawn from the realm of charity and chance, and that health and life should be fully insured, we indorse the soldiers and sailors' insurance bill now before Congress.

We declare for universal equal suffrage.

Fully realizing that the perpetuity of democratic institutions is involved in freedom of speech, of the press, and of assemblage, we declare that these essential rights must be guarded with zealous care lest all other rights be lost. We declare, however, that where expressions are used which are obstructive to the government in its conduct of the war, or are clearly capable of giving aid or comfort to the

nation's foes, the offenders should be reprimanded by the constituted authorities in accordance with established law.

Inspired by the ideals of liberty and justice herein declared as a fundamental basis for national policies the American Alliance for Labor and Democracy makes its appeal to the working men and women of the United States, and calls upon them to unite in unanimous support of the President and the nation for the prosecution of the war and the preservation of democracy.

LVIII. Problems in the Mobilization of American Labor

1. THE CHALLENGE TO AMERICAN LABOR[1]

A. GREAT BRITAIN[2]

The British trade union movement, having first decided to support the war, immediately applied itself to the ways and means by which it could best do it, and the first thing we did was to declare there should exist during the period of the war an industrial truce. That is to say, that with the war raging as it was it would be madness and folly to have side by side with that war raging an industrial war in our own country, and we entered into an agreement with the employers whereby they, on the one hand, agreed that they would not interfere with or reduce the conditions prevalent at the time, in return for which we, on the other hand, agreed that we should not attempt to set up any new standard conditions, and that truce was practically agreed to by the whole of the organized workers of Great Britain.

B. FRANCE[3]

To do a good day's work is no longer enough; one must do all there is to be done. The worker's effort is on the same plane of necessity as military effort. During the Battle of Verdun, at a certain forge for "155" shells, the man's day passed at one bound to eighteen hours, and to such speed that the proportion of sick and exhausted reached 11 per cent. The soul of his labor lifts the workman above fatigue, and social equity is dominated by the duty to keep for France her just place in the world. France has been constrained to an experience which has revealed her to herself. She will

[1] Reprinted in *American Industry in War Time* (March 10, 1918), pp. 8–9.

[2] A statement by Hon. James H. Thomas, General Secretary, National Union of Railway Men of Great Britain and Ireland.

[3] A statement by *The New Republic*, July 21, 1917.

know how to make her force endure by maintaining in industry the power invented for battle.

C. ITALY[1]

The response of Italian labor, both field and factory, to the emergency of war and the necessity of industrial mobilization has been splendid. Our munition works and transportation systems, for example, are all under full military discipline and every man employed in such an industry is rated as a soldier. But he gets the pay of a mechanic that prevails in that industry. It seems unjust, I know, that a soldier whose work it is to fight at the front receives about five cents a day, while the soldier whose training fits him for shop work may get five dollars, but there seems no other way. We have had no strikes, no labor troubles of any sort, since the war began, and we do not fear any.

2. CONSERVE OUR INDUSTRIAL ARMY[2]

WHEREAS, The entrance of the United States into the World War appears imminent; and

WHEREAS, Other countries upon engaging in the conflict permitted a serious breakdown of protective labor regulations with the result, as shown by recent official investigations, of early and unmistakable loss of health, output, and national effectiveness; and

WHEREAS, Our own experience has already demonstrated that accidents increase with speeding up and the employment of new workers unaccustomed to their tasks, that overfatigue defeats the object aimed at in lengthening working hours, and that new occupational poisoning has accompanied the recent development of munition manufacture; and

WHEREAS, The full strength of our nation is needed as never before and we cannot afford to suffer loss of labor power through accidents, disease, industrial poisoning, and overfatigue; now, therefore, be it

Resolved, That the American Association for Labor Legislation, at this critical time, in order to promote the success of our country in war as well as in peace, would sound a warning against the shortsightedness and laxness at first exemplified abroad in these matters, and would urge all public-spirited citizens to co-operate in maintaining, for the protection of those who serve in this time of stress the industries of the nation (who as experience

[1] A statement by Dr. Francesco Saverio Nitti, member of the Italian Parliament and member of the Italian War Mission to the United States.

[2] Congress' announcement of its attitude toward standards of legal protection for workers in time of war, issued March 23, 1917, by the Executive Committee of the Association of Labor Legislation. From *Labor Laws in War Time*, no. 1, p. 1.

abroad has shown are quite as important to military success as the fighting forces), the following essential minimum requirements:

I. SAFETY

1. Maintenance of all existing standards of safeguarding machinery and industrial processes for the prevention of accidents.

II. SANITATION

1. Maintenance of all existing measures for the prevention of occupational diseases.

2. Immediate agreement upon practicable methods for the prevention of special occupational poisonings incident to making and handling explosives.

III. HOURS

1. Three-shift system in continuous industries.

2. In non-continuous industries, maintenance of existing standard working day as basic.

3. One day's rest in seven for all workers.

IV. WAGES

1. Equal pay for equal work, without discrimination as to sex.

2. Maintenance of existing wage rates for basic working day.

3. Time and one-half for all hours beyond basic working day.

4. Wage rates to be periodically revised to correspond with variations in the cost of living.

V. CHILD LABOR

1. Maintenance of all existing special regulations regarding child labor, including minimum wages, maximum hours, prohibition of night work, prohibited employments, and employment certificates.

2. Determination of specially hazardous employments to be forbidden to children under sixteen.

VI. WOMAN'S WORK

1. Maintenance of existing special regulations regarding woman's work, including maximum hours, prohibition of night work, prohibited hazardous employments, and prohibited employment immediately before and after childbirth.

VII. SOCIAL INSURANCE

1. Maintenance of existing standards of workmen's compensation for industrial accidents and diseases.

2. Extension of workmen's compensation laws to embrace occupational diseases, especially those particularly incident to the manufacture and handling of explosives.

3. Immediate investigation of the sickness problem among the workers to ascertain the advisability of establishing universal workmen's health insurance.

VIII. LABOR MARKET

1. Extension of existing systems of public employment bureaus to aid in the intelligent distribution of labor throughout the country.

IX. ADMINISTRATION OF LABOR LAWS

1. Increased appropriations for enlarged staffs of inspectors to enforce labor legislation.

2. Representation of employees, employers, and the public on joint councils for co-operating with the labor departments in drafting and enforcing necessary regulations to put the foregoing principles into full effect.

3. THE ORGANIZATION OF MAN POWER[1]

The purpose of this article is to attempt to bring simplicity and understanding to the industrial situation in the United States at the present time. It is an attempt to set down what has happened, is happening, and is going to happen to the fundamentals of the business and industrial structure of the country. It begins and ends with man power, for that is what it all comes back to. If the discussion be kept in terms of man power, it will be within the comprehension of any understanding, for the whole problem becomes merely one of addition and subtraction—under our present conditions, chiefly subtraction.

"Man power" is frequently used in military discussion as meaning the total number of soldiers a nation can bring together. More broadly, and more properly, it is the entire strength of a nation, military and industrial. In this more correct sense the man power of the United States is 35,000,000—the 35,000,000 men, women, and children who do the country's work, who serve it in the army, who dig its coal, who raise its crops, who run its trains, who build its roads, who make its powder, who turn out its munitions.

This 35,000,000 man power is our all. It is the whole measure, and the true measure, of our wealth. It is the measure of our effectiveness in war and peace. It is the total—to put it in terms of our national card game—of our pile of chips in the fight with Germany. We cannot increase it. To a certain extent we can mobilize it more effectively and manage it more economically. But we shall always

[1] By Mark Sullivan. Adapted from "Man Power," *Collier's Weekly* (June 22, 1918), pp. 1–2; 35–38. Copyright by P. F. Collier & Son, Inc., 1918.

Ed. Note.—Mr. Sullivan was until recently editor of *Collier's Weekly*.

come back to this 35,000,000, and no more, as the measure of this nation's capacity to work, to fight, to accomplish, to do.

Now let us see just what has happened to this 35,000,000 since the war began. The first thing to bear in mind is that with the beginning of the European War the greatest source of increase for our man power was cut off. We used to get an increase of a million man power a year through immigration. We now get substantially nothing. Few people recognize the significance, in a business and economic sense, of this cutting off of immigration. The immigrant was almost the only source of what we call "day labor," the men who do the building and repairing of railroads, the mending of streets and roads, mining, and the rough work of steel mills and other factories. We have gone on as if this source of our labor were a perpetual fountain. We have not stopped to consider the business and economic and social changes which must come about when the fountain runs dry, and we are compelled to adapt ourselves to a condition very strange to us. Moreover, an immigrant raised to maturity, with all the expense of his nurture and training paid by his own country, delivered at our gates free of charge as a working unit of man power, was a valuable asset.

After the cessation of the accustomed increase from immigration the most obvious thing that has happened to our man power is that 2,000,000 of it, between the ages of twenty-one and thirty-one, have gone into the army, and are no longer at their accustomed posts in factories, mines, offices, and farms. This 2,000,000 is the best of our man power. It was at the age of greatest vitality. The loss of it to our industries is greater than the mere figures indicate. Two million man power (a year from now it will be 3,000,000, two years from now it will be 5,000,000) out of our total 35,000,000 have ceased completely to be normal producers of goods. Incidentally, as soldiers they have become larger consumers than they were before of food, clothes, and other materials.

Here, then, is the first subtraction: 2,000,000 from 35,000,000 leaves 33,000,000. But this is only the first, and not the largest, of many subtractions.

Subtract another half million for the navy.

Subtract another half million for shipbuilding.

At this point it might be appropriate to ask some of the "business as usual" advocates just how business can be as usual, just how 32,000,000 man power can do the amount of work and business usually

done by 35,000,000. As a matter of fact, we do not have even 32,000,000 man power left available for business as usual. For the deductions just pointed out are not by any means all the deductions that have occurred. They are not even the largest deductions. I have set them down first merely because they are the most obvious. They are the best ones for illustrating the thing that is happening. They involve actual dislocations of man power—men who go away, not only from their accustomed pursuits, but also from their accustomed homes. But it must be remembered that man power can be diverted without being dislocated. A man may continue to live in the same house, and use the same pick, and work in the same mine, and get his wages from the same boss; but if the ton of ore he digs finds its ultimate destination in rifles instead of piano wires, he is a unit of man power subtracted from its normal uses. And these diversions are enormous.

As to the precise number who have gone and are now going from their normal pursuits into powder making and bullet making and rifle making and gun making and the like, it is not possible to give figures as exact as in the case of the army and navy. But it is possible to arrive at some convincing estimates. Consider, for example, one of the minor war industries, airplane making. Ultimately, if we do what we ought to do, we shall have at least 50,000 aviators in France. It is estimated that one aviator on the fighting front will require forty men back of the line for repairs and in the factories as mechanics and gathering spruce and in other ways producing the materials. Based on that estimate, we shall, during the present and coming year, take another 2,000,000 out of our man power for building our air fleet, and keeping an adequate supply of these unusually intricate and unusually breakable machines flowing toward the front in France.

But airplane making is merely one of the minor of the several war industries which are taking millions away from the usual pursuits of our normal 35,000,000 of man power. In one concern, Bethlehem Steel, nearly 100,000 employees, about 90 per cent, are engaged on government orders. This is fairly typical of the steel business as a whole. During May and for three months preceding, 85 per cent of the entire steel trade of the United States was engaged in war work. And until the war ends this proportion is sure to increase rather than diminish.

But it is not necessary to go through all the tedious computations of the number of our man power which has been taken for powder

making, for shell making, for rifle making, and the like. The figures change from day to day, and the change is always in the direction of increase. The sum of it is pretty accurately known to those whose business it is to form expert judgments on such subjects. For example it has been pointed out that the total amount of wealth produced in a year is about $40,000,000,000. Set down alongside this fact the other fact that the appropriations made by the United States Government for the present year are $19,000,000,000. That is to say, the government is going to buy, for war purposes (allowing for some millions for duplications) about one-half of the entire productive capacity of the country. In other words, the government is going to hire for war work, and take away from normal pursuits, nearly one-half the entire man power of the country. That would be between 15,000,000 and 16,000,000 of our man power. Others estimate the number, for the present, as somewhat lower. They say that although it is true that the country, in an industrial way, is now more than 50 per cent at war, various considerations reduce the total of man power diverted. A little later on, they say, the diversion will amount to 50 per cent.

Out of all the mass of figures, exact and estimated, the one net fact, the "red-ink" fact, as the accountants express it, is this: as compared with normal peace-time production there is a labor shortage in the United States of at least 15,000,000 man power. Such a shortage from normal as 15,000,000 is not a shortage at all, but a famine, and it is this famine in man power which underlies all other famines.

Already "the farms are crying for labor. The mines are crying for labor. The shops are crying for labor. The railroads are crying for labor. The manufactories are crying for labor. There is shortage of labor everywhere."

With a shortage of 15,000,000 man power, or nearly one-half of our whole, it is so obvious that we cannot have "business as usual" that even the most hopeful of the boosters must admit it. But these learned economists of the retail millinery and bric-a-brac trades are invincible optimists. At this point doubtless they will say: "Well, with a 50 per cent shortage in our man power we can at least have business 50 per cent as usual." But they cannot. Right here comes the distinction between "essentials and nonessentials." We are not going to be able to get this one-half of our man power to fight the war as soldiers and workmen by taking an even half from the production of each of our normal peace-time lines of goods. For there are some things we can't get along without. There are some of our normal

peace-time products which we must have. Indeed, in war they are more necessary to have than in peace. These particular businesses must go on as usual, or above usual. These are the essential industries. Of these the biggest and most obvious is farming.

The farms of the United States, this year and so long as the war lasts, must supply food not only for the population which normally depends on our farm products, but, in addition, for large portions of the population of France, England, Italy, Belgium, and some neutral countries. They must do this or some of our Allies must starve. Now, farming is at all times our biggest consumer of man power. In peace times the number of man power engaged in it is about 12,000,000 —about 6,000,000 farm owners and 6,000,000 farm laborers. Whether this number of man power engaged in farming has been increased during the war, I do not know. It is a fact that the quantity of farm products has been enlarged. The farmers of the United States planted and harvested last year the largest acreage on record. In addition the American farmer increased the number of horses in the country (in spite of the shipments abroad for war purposes); he raised more cows; he raised more beef cattle; he raised more pigs.

From this it may fairly be argued that the portion of our man power engaged in farming must have increased. But assume that it remains at the normal 12,000,000. Then we have this condition: About 18,000,000 of our man power either has been or soon will be diverted for war; out of the remaining 18,000,000, 12,000,000 are engaged in farming. Seen in this cold statistical light, the prospects of "business as usual" do not look very up-and-coming.

Of the 18,000,000 man power required for war, none can be taken from farming. They must come from somewhere else.

Now, there is one other of our great occupations which must be kept up to the normal man power. It must be kept up to normal; it ought to be increased. The railroads are a most essential war industry. And they are in a bad way. We had a transportation failure last winter which caused us much inconvenience and held back our war work. Besides, those competent to speak about the situation say that the coal problem of last winter was really a transportation problem, that the coal famine was due to a lack of cars. The man power normally engaged in railroad work is about 2,250,000. The late James J. Hill, before the war began, said the railroads ought to have a billion dollars a year spent on them for five years to bring them up to good condition. That is the same as saying that even in

peace times the railroads needed a million more man power. And it is not only the railroads. It is the same in every branch of the transportation industry.

Few people have observed a most striking evolution that is just beginning in America. The Philadelphia *Public Ledger* carries two columns of advertisements of daily motor-truck express service between Philadelphia and New York, with tri-weekly services to smaller cities. Regularly, every day, 640 motor trucks carry freight on schedule on the public roads between New York and Philadelphia. The Post Office Department has just inaugurated daily motor-truck package services in the country districts for thirty to fifty miles outside Philadelphia, Baltimore, and Washington. All this is merely a hint of what is coming. And not only will more man power be needed to build these trucks and drive them and load them—that is only a fraction of the need. Of the 18,000,000 man power needed for the war, none can be taken from the transportation industries. They must come from somewhere else. With only 35,000,000 man power to start on, with 15,000,000 of that diverted to war work; with 12,000,000 engaged in farming; with 2,250,000 engaged in transportation, and more needed—under these conditions the idea of business as usual is out of the question.

Beat the devil around the bush as we may, we shall always arrive at the same point; namely, a fixed total of 35,000,000 man power, and under present conditions a shortage of from 15,000,000 to 18,000,000.

That is the main, central fact. That is the essential truth.

4. IMMIGRATION AND MAN POWER

The following figures, taken from the tables compiled by the Commissioner General of Immigration, indicate the influence exerted by the war upon the man power of the country.

	Total Immigration	Farm Labor	Other Unskilled Labor
1909	543,843	199,494	37,600
1910	817,619	300,485	107,354
1911	512,085	174,903	67,371
1912	401,763	190,524	127,496
1913	815,303	334,227	26,573
1914	769,276	291,877	25,578
1915	150,070	22,858	125,079
1916	125,941	21,683	23,803
1917	216,498	21,683	23,803

5. WHAT ORGANIZATION OF THE LABOR MARKET CAN DO[1]

When the announcement was made that a soldiers' cantonment was to be built in Ohio, at Chillicothe, and that some 20,000 workers would be needed to build the camp in the time allotted by the government contract, the state was ready with an organization to handle the project. It had a double problem: first how to get the men, and then to make sure that the industries of the state would not be dislocated by the withdrawal of such a large force for army work.

Ohio's director of employment tackled both of these problems with characteristic vigor. He went immediately to the military authorities and to the contractor who was to build the camp and offered the services of Ohio's employment system in securing the necessary help. He warned them of the dangers of promiscuous advertising for help, told them how it would endanger operations of other industries, how men might be led to the camp for whom there was no work at all, and how an oversupply of labor might be created at the camp while yet the particular kind of skill needed might not be there. The management, of course, wanted to be sure that it could get all the labor that would be necessary, and when the director of employment, who knows the labor market conditions of the state thoroughly, practically guaranteed to deliver all the necessary labor, the contractor and the military authorities agreed to hire all their help through the employment service of the state. All the men sent to work at the camp would be consigned to the public employment office located in Chillicothe and a branch office was established at the cantonment about two miles from town.

As soon as the arrangement had been made and even before the work of building had been begun, the central office at Columbus sent instructions to all the twenty-one offices in the state explaining the method by which the labor force would be supplied, and listing the kinds of workers that would probably be needed. Each office was requested to begin registering men who would want to go to the camp to work. All those registered were to hold themselves in readiness to go to Chillicothe promptly when notified. To get men to register,

[1] By William M. Leiserson. Adapted from "The Labor Shortage and the Organization of the Labor Market," *The Survey*, XL, 65–66. Copyright by the Survey Associates, Inc., in 1918.

Ed. Note.—Mr. Leiserson is a close student of American labor problems and has contributed many valuable articles to scientific magazines.

labor unions of the various trades needed were communicated with, notices were posted in the employment offices, and advertisements were inserted in newspapers, carefully guarded to prevent men from going directly to the cantonment and flooding the town before the work began.

When the work was about to begin the builders of the camp notified the Chillicothe employment office that on a certain day they would need so many hundred laborers and carpenters and gave the wages and other terms of employment. This information was immediately telephoned to the central office in Columbus, and the director went over the reports from his branches to see from what offices he could draw the necessary men to fill this order. To the superintendents of the employment offices which were in a position to supply the help, he wired to begin sending laborers and carpenters, giving each his quota as to how many were wanted from his office and asking each to report that same day how many were sent before the close of business. Within a few hours men were moving to Chillicothe in an orderly fashion, with definite assurances of work when they got there and of the terms on which they would be employed. And that same evening the central office in Columbus knew how many men had been sent by each office. In the morning the Chillicothe office reported as to how the men were arriving as well as the additional needs of the camp management. The director was then in a position to notify the branch offices how many men they would each be expected to send that day. In about twelve weeks over 17,000 men were in this way sent to work at the Chillicothe encampment from the state offices.

It was not always possible to keep those who were hiring the men to abide by their agreement to employ labor only through the employment offices. They feared constantly that they would not get enough help. They were accustomed to advertising for thousands of men and getting a hundred, and they could not feel confidence in an organization that claimed ability to supply all labor as needed. Unknown to the employment offices they sent agents out to try to get help. This confused matters for a while. But the number who came to work at the camp without going through the employment offices did not exceed one-fifth of the total employed. Then they feared they would not get the help fast enough, and they insisted on paying transportation for the men. In vain did the director of employment assure them that all the men would be forthcoming, that plenty could be

secured from within the state and that any workers who could not pay the two or three dollars to go to Chillicothe would not be much good and would not be steady employes. In all probability the nature of the contract—cost plus a percentage—had something to do with the insistence on paying transportation charges. At any rate about $10,000 was spent in this way and as a result the "turnover" of labor was unnecessarily increased. The directors of Ohio's employment system were able to prevent paying fares for men to come from outside the state; but within the state, carpenters, plumbers, and other skilled men earning more than $6 a day, as well as laborers, had their fare paid to the job.

With all of these difficulties the Ohio employment system was nevertheless able to demonstrate the great saving and efficiency that might be secured by hiring labor through a centralized organization that could control the supply. The labor "turnover" was much smaller than on most jobs of the kind, the work did not suffer for lack of labor, and no oversupply was attracted to the city.

But Ohio's employment service was not satisfied with all this. While it was still engaged in shipping men to the camp it began to work on plans for distributing that army of 20,000 workers over the state when this work at the camp should be finished. Agents were sent to Chillicothe to register men as they were preparing to quit and instructions were issued to all the branch employment offices to visit employers in their communities, tell them of the classes of labor that would soon be released, and get orders for help that could be supplied from Chillicothe. Lists of the men working at Chillicothe were made, with their occupations and experience, and sent to each of the employment offices. These offices learned the demand from employers in their cities for the various classes of labor, and made arrangements for getting the men from Chillicothe. In this way the workers at the army camp are now being distributed in an orderly manner and all the idleness and waste that ordinarily follow the completion of a big project of this kind are eliminated.

6. UNITED STATES EMPLOYMENT SERVICE[1]

For more than a year it has been our pride that not our armies and navies only but our whole people is engaged in a righteous war. We have said repeatedly that industry plays as essential and honorable

[1] By Woodrow Wilson. The President's Announcement, June 17, 1918.

a rôle in this great struggle as do our military armaments. We all recognize the truth of this, but we must also see its necessary implications—namely, that industry, doing a vital task for the nation, must receive the support and assistance of the nation. We must recognize that it is a natural demand—almost a right—of anyone serving his country, whether employer or employe, to know that his service is being used in the most effective manner possible. In the case of labor this wholesome desire has been not a little thwarted owing to the changed conditions which war has created in the labor market.

There has been much confusion as to essential products. There has been ignorance of conditions—men have gone hundreds of miles in search of a job and wages which they might have found at their doors. Employers holding government contracts of the highest importance have competed for workers with holders of similar contracts, and even with the government itself, and have conducted expensive campaigns for recruiting labor in sections where the supply of labor was already exhausted. California draws its unskilled labor from as far east as Buffalo, and New York from as far west as the Mississippi. Thus, labor has been induced to move fruitlessly from one place to another, congesting the railways and losing both time and money.

Such a condition is unfair alike to employer and employe, but most of all to the nation itself, whose existence is threatened by any decrease in its productive power. It is obvious that this situation can be clarified and equalized by a central agency—the United States Employment Service of the Department of Labor, with the counsel of the War Labor Policies Board as the voice of all the industrial agencies of the government. Such a central agency must have sole direction of all recruiting of civilian workers in war work and, in taking over this great responsibility, must at the same time have power to assure to essential industry an adequate supply of labor, even to the extent of withdrawing workers from nonessential production. It must also protect labor from insincere and thoughtless appeals made to it under the plea of patriotism, and assure it that, when it is asked to volunteer in some priority industry, the need is real.

Therefore, I, Woodrow Wilson, President of the United States of America, solemnly urge all employers engaged in war work to refrain after August 1, 1918, from recruiting unskilled labor in any manner except through this central agency. I urge labor to respond as loyally as heretofore to any calls issued by this agency for voluntary

enlistment in essential industry. And I ask them both alike to remember that no sacrifice will have been in vain, if we are able to prove beyond all question that the highest and best form of efficiency is the spontaneous co-operation of a free people.

7. THE NEED OF HOUSING

A. A SHIPBUILDER SPEAKS[1]

I should like to call attention to the need of an adequate government program for the housing of new employees of shipyards, munition factories, etc. A committee of the Council of National Defense has reported favorably on the building of such houses by the government, but congressional action is needed, and the President should be made to feel that public opinion would be behind the government in undertaking this radical policy.

As president of the Newburgh Shipyards, Inc., engaged in building steel ships for the government, I have had enormous difficulties to contend with in securing enough labor to come to Newburgh, N.Y., on account of the great shortage of houses there. In the next two months we shall need two thousand more employees to man our shipyard properly, and there is not a vacant house in Newburgh in which to put them. The same conditions, or worse, are present at many other shipyards and munition factories. For efficient operation of the industries, the workmen must be taken care of in decent houses.

Private capital cannot be expected to build these houses now. England met a similar situation last year by appropriating fifty million dollars for government housing projects. At least a hundred million dollars is needed immediately in America for the same purpose. This will not be a Socialistic venture; it will be a war measure of the utmost importance.

B. CONDITIONS IN NEW ORLEANS[2]

I speak of conditions here in New Orleans with which I am most familiar, and of the period immediately preceding our entrance into the war. Unskilled labor was earning then from $1.50 to $2.00 a day, perhaps $40.00 a month on the average after deducting time lost; making the payment of even $8.00 a month rent a difficult matter for

[1] By Thomas C. Desmond. A letter published in *The New Republic*, XIII (November 24, 1917), 98.

[2] By Roland Otis. Adapted from a letter published in *The New Republic*, XIII (December 22, 1917), 216.

a man of family, while it was not possible to rent a small four-room and bath house for less than $16.00—just double of what he could afford to pay.

I have tried, myself, to plan a small four-room house that would be within the means of the better paid laborer, at least; but I found that a house of the simplest kind, with two very small independent bedrooms, bath, living-room, and kitchen, with everything eliminated but the absolutely essential, could not be built for less than $1,500, to which must be added the cost of a site, say $200, a total investment of $1,700; allowing 6 per cent on the investment and adding taxes (3 per cent on 80 per cent of value), depreciation, and repairs, lost rents, etc., these costs would call for a rent of about $17 a month. That my costs were not unreasonably high is confirmed by the prevailing rents here for small houses—for a four-room house without bath, with the rooms arranged one behind the other (making the bedrooms mere passage-ways to the back of the house), and toilet in the backyard, the rent is $12 to $13; the same type of house with bath and porch rents for $16 to $17, with very few of these last being built because they fail to earn 7 per cent, the current rate of interest here on small property. It is certain that here in New Orleans the unskilled laborer finds it impossible to live in a decent house; even if his wife works, the most they can hope for is to occupy one of the $12 a month houses—houses inadequately ventilated and flimsily built, red hot in summer and cold as outdoors in winter, with no privacy for the bedroom, no bath, and the toilet in the backyard.

In other parts of the United States conditions do not seem to be very different: the Octavia Hill Association, of Philadelphia, although buying the land at wholesale and building a group of forty houses at once, eliminating all profits of land speculators or building contractors, building houses of the simplest character without a dollar wasted anywhere, have not been able to earn the current rate of interest on their investment; the experience of the Woodlawn Co., of Wilmington, Del., is similar, as is also that of the Washington Sanitary Housing Co. and of other semi-benevolent companies whose statements I have seen. They have all failed to earn adequate dividends, and it has been very difficult for them to enlist additional capital for any new construction. It is true some large employers of labor are furnishing good housing at rents within the reach of their unskilled labor; but it is certain they cannot be earning the current rate of interest on the investment; and at the best, the number of laborers

so housed constitutes an inconsiderable fraction of the total number, and can have little if any influence on the solution of the problem.

The problem of decent housing for our laborers will never be solved by private enterprise, although the much berated land sharks, speculative builders, and selfish manufacturers have little if anything to do with our failure. The reason is simple enough—our laborers do not earn enough to pay for decent housing. If they cannot earn more than they have been earning in the past, then they must continue to be housed like cattle; that is all, unless the state is prepared to pay part of the cost of housing as it now pays for education and medical attention. It is a very large question, and we surely need all the help that we can get from the English experiments in housing the munition workers.

LIX. War-Time Labor Conditions and Policies

1. INDUSTRIAL UNREST IN GREAT BRITAIN[1]

A comparison of the reports shows that there is a strong feeling of patriotism on the part of employers and employed throughout the country and they are determined to help the state in its present crisis. Feelings of a revolutionary character are not entertained by the bulk of the men. On the contrary, the majority of the workmen are sensible of the national difficulties, especially in the period of trial and stress through which we are now passing.

While the eight reports agree as to the main causes of industrial unrest, important differences appear in the emphasis laid by the various commissions upon specific causes.

1. All the commissions put in the forefront, as the leading cause of unrest, the fact that the cost of living has increased disproportionately to the advance in wages, and that the distribution of food supplies is unequal. Commissioners are unanimous in regarding this as the most important of all causes of industrial unrest. Not only

[1] By the Rt. Hon. G. N. Barnes, M.P. Adapted from "Summary of the Reports" of the several divisional committees appointed by the Prime Minister "to enquire into and report upon industrial unrest." The summary was presented to the Prime Minister, July 17, 1917. The report as a whole, including the separate reports from particular districts, has been republished under the title "Industrial Unrest in Great Britain," as *Bulletin No. 237*, pp. 9–14, by the United States Department of Labor Statistics.

Ed. Note.—G. N. Barnes (1859—) has been Pensions Minister since 1916. In 1917 he was made a member of the War Cabinet.

is it a leading cause of unrest in itself, but its existence in the minds of the workers colors many subsidiary causes, in regard to which, in themselves, there might have been no serious complaint.

2. The operation of the Munitions of War act has undoubtedly been a serious cause of unrest, in particular the restriction upon a workman as regards the selection of his sphere of labor. If the leaving-certificate restriction is removed the leading cause of dissatisfaction under this heading will cease to exist. There will still remain, however, one element which is very important, because it projects itself into the after-war settlement. That is the complaint that sufficient attention is not being paid by employers to article 7 of Schedule 11 of the 1914 act. Changes of working conditions, more especially the introduction of female labor, have been made without consultation with the work people.

3. All the reports refer in general terms to what is called the want of co-ordination between government departments dealing with labor; but probably much of what is said on this head may have been written under a misconception and without a clear understanding of departmental administration. It seems hardly possible that any single department could during the war carry the whole of the immense problems of the supply departments which have bearing upon the control of labor. Apart from the suggestion that one central authority should be set up, the reports contain proposals for the formation of informal local boards to settle local disputes, or for the appointment of a local commissioner with technical knowledge to settle disputes other than those arising on questions of wages. A proposal which finds general favor is that workshop committees should be set up.

4. Causes of unrest which are reported as acute in certain districts, but are not universal, include:

a) The want of sufficient housing accommodation in congested areas—especially in Scotland, Wales, the Northeast, and certain parts of the Northwest and Southwest areas.

b) The liquor restrictions, which operate as a cause of unrest in some districts but not in others. For example, in the West Midlands area the need for a further supply of beer of an acceptable quality is urgent, and to some extent the same is true in London and Swansea; on the other hand, in Scotland the subject was never mentioned.

c) Industrial fatigue, which is not a universal cause of unrest. There is a general consensus of opinion that Sunday and overtime labor should be reduced to a minimum, that holidays should not be

curtailed, and that the hours of work should not be such as to exclude opportunities for recreation and amusement.

5. The great majority of the causes of industrial unrest specified in the reports have their root in certain psychological conditions. Want of confidence is a fundamental cause, of which many of the causes given are merely manifestations. It shows itself in the feeling that there has been inequality of sacrifice, that the government has broken solemn pledges, that the trade-union officials are no longer to be relied upon, and that there is a woeful uncertainty as to the industrial future. The reports abound in instances of the prevailing feeling that pledges are no longer observed as they were in pre-war days. Allusions to "scraps of paper" are painfully numerous. Perhaps sufficient allowance has not been made for the difficulties which have beset all in authority through the ever-changing phases of industrial conditions owing to the war.

6. The reports bear a striking testimony to the value of the proposals made in the report of the subcommittee of the reconstruction committee, dealing with the relations of employers and employed. Broadly speaking, the principles laid down appear to have met with general approval.

2. THE EFFECTS OF THE WAR UPON BRITISH LABOR[1]

1. THE LOYALTY OF ORGANIZED LABOR

We have first to notice the extent to which the British labor movements has, almost whole-heartedly, supported the war. The whole-heartedness and loyalty with which the British trade unions (which have over four million members and accumulated funds exceeding six million pounds sterling) have supported the war has been made manifest, first, by their devoted assistance in the voluntary recruiting for the army, and, secondly, by their abandonment for the sake of increasing the output of munitions, etc., of all trade union rules and practices that could be thought to hamper the production of munitions of war.

When it became evident that an enormously increased output of munitions of war was required, the trade unions were asked by the government to give up, for the duration of the war, all their rules and customs in any way interfering with maximum production. Without

[1] By Sidney Webb (see p. 451). Adapted from "British Labor under War Pressure," *North American Review*, CCV, 874–84. Copyright, 1917.

a single exception the trade unions agreed to this request. They formally laid aside all restriction of output; all limitation of the working day; all refusal to work overtime, at night or on Sunday; all objection to the introduction of labor-saving machinery; all resistance to the admission to their trades of non-unionists, unapprenticed men, laborers, boys, and even women; all opposition to the substitution of piecework payments for hourly rates, and all reluctance to co-operate in teams as component parts instead of each workman completing his own task. They gave up the right to strike and submitted to compulsory arbitration. They even accepted in the Munitions of War Acts of 1915 and 1916, in order to secure continuity of production, the position of being forbidden to leave their employment under a heavy penalty. Never has there been, in any community, a greater or a more complete sacrifice for the common good. The result has been that—at the cost of greatly increased hours of labor and greatly increased strain and effort of the manual workers—the output per operative has been enormously increased throughout the whole kingdom, by means of a great increase of machinery. By this sacrifice on the part of the British labor movement British manufacturing industry has been, in these two years of war, very largely revolutionized—more completely changed in fact than at any time since the great industrial revolution of 1780–1825.

II. ECONOMIC POSITION OF WAGE-EARNING CLASS

Having noted the patriotic efforts of the British labor movement, we have now to record the results of the war on the economic position of the wage-earning class. This war has, at almost all points, baffled the prophets; and in no department have the results been more unexpected than in the economic field. Thus, all previous wars of magnitude have been accompanied by terrible financial suffering among the mass of the people. One of their most frequent results—a social injury enduring for a whole generation—has been the degradation of the standard of life among the wage earners. The last war waged by the United Kingdom on anything like the scale of the present Armageddon—the Napoleonic conflict that lasted almost unceasingly from 1793 to 1815—reduced the British working class to a very general destitution, exhausted popular savings, filled the prisons, brought down wages to the barest subsistence level, and destroyed for many years every vestige of either industrial or political power among the wage-earning class. On the outbreak of the present war many people

naturally expected widespread unemployment and distress among practically all the poorer classes. The trade unions, it was said, would soon be bankrupt and powerless. The political influence of organized labor, it was predicted, would be swept aside as completely as its industrial strength. The great Co-operative Movement, with its network of distributive stores and growing manufacturing departments, would, it was supposed, suffer at least an arrest of development, and might have its resources seriously impaired. The Friendly Societies, entangled in the gigantic scheme of National Insurance, would, it was feared, find their accumulated funds drained dry. In short, many people looked, on the outbreak of war, for ruin and misery among the mass of the working people. Certainly, no one would have predicted that, after a war of such magnitude and intensity had been waged for over two and one-half years, the wage-earning population of the United Kingdom would find itself, as a whole, actually better off financially than it was in the years of prosperity that immediately preceded the war. Yet this is today undoubtedly the fact.

In spite of a rise of prices of foodstuffs now approaching 100 per cent; in spite of an average increase in the total cost of living of the typical wage-earning family which may be put at 60 to 70 per cent; in spite of the levy of new taxation on the wage-earning class to the extent, it is estimated, of at least fifty millions sterling per annum, there is every sign of the British manual working class, taken as a whole, being considerably better off in 1917 than in 1913. Money wages have risen, practically everywhere, in one form or other, sometimes only by 10 or 20 per cent, but in exceptional instances by 60 or 80 per cent. It is true that the rates of wages have never (or hardly ever) risen to the same extent as the prices of commodities, or the cost of living. But, with relatively few exceptions, the average *family* income has increased more than the rate of wages. More members of the household are, in most families, earning money—there are no unemployed men, and no intervals in which no wages are earned; the girls are at work as well as the boys, the superannuated, and the invalids; in hundreds of thousands of cases the wives as well as the spinsters and widows. Moreover, piecework earnings have been widely substituted for fixed weekly wages; there has been a free advancement of laborers and of women from unskilled to skilled rates; the working hours have often been lengthened, bringing increased earnings; and overtime and Sunday duty have been freely adopted up to the very verge of excessive strain. The loss of family income

consequent on the absorption of five million men into the army and navy has been made good by the payment from public funds of separation allowances and pensions on a scale of quite unprecedented liberality. The disabled soldiers, in particular, of whom already many tens of thousands have been discharged, are being provided for in ways unknown in any previous campaign.

The total result is that, while a considerable number of cases of individual suffering exist, taking the wage-earning population of the United Kingdom as a whole, far from feeling the strain of war it exhibits today every indication of unparalleled prosperity.

III. BRITISH LABOR POLICY

This remarkable result, so far, of such a calamity as the present war, has, of course, not "come about of itself." It has been the outcome of the measures which have been deliberately taken by the government and Parliament, supported generally by public opinion, and acquiesced in by the employers and the propertied classes. And this policy of deliberately maintaining unimpaired, at whatever cost to the Treasury, the standard of life of the manual working wage earners—in consonance with the teaching of the political economists that any degradation of this standard of life is the worst injury that a nation can suffer—has undoubtedly been made possible, as an achievement of economic statesmanship, only by the industrial and political strength, and the persistent pressure, of the British labor movement.

The measures taken as the outcome of this economic statesmanship have been many and varied.

We must note, to begin with, the definite refusal to allow any use to be made, for any war need, of the demoralizing machinery of the Poor Law, which has lost all credit and has for a decade merely been awaiting abolition in favor of up-to-date separate organizations for the appropriate treatment of the lunatic, the sick, the widows and orphans, and the unemployed. What the British labor movement demanded, and what public opinion indorsed, was a policy of prevention instead of relief. Under the apprehension of widespread unemployment and distress, a new organization, entirely unconnected with the Poor Law, was set up throughout the whole Kingdom in August, 1914, in connection with the municipal and county authorities, and a fund was raised by voluntary subscriptions to supplement the public assistance that the government undertook to provide from moneys to be voted by Parliament. The government adopted as its

policy, as demanded by the whole labor movement, the strengthening of the labor market by the immediate undertaking by the local authorities of those public works of definite utility that might otherwise have been executed during the ensuing decade.

This marks an epoch in the history of unemployment in the United Kingdom. Within a few weeks, however—before the new policy of prevention could be put into force, and even before it was commonly understood—it became evident that no widespread unemployment among men was to be feared. Unemployment among women workers lasted for a few months, during which it was sought in pursuance of a like policy, not to start the old eleemosynary "relief works," but to organize public orders, and where necessary to supply full maintenance to the women who could not immediately get employment, conditional on their attending at centers for domestic economy and other training. For the last two years the difficulty has been to get enough workers; and the greater part of the fund subscribed is hoarded for use when peace comes.

The influence of the changed opinions on economic matters, and of the strength of the organized labor movement, is seen in the remarkable series of government decrees by which the workers' standard of life has been protected from degradation.

We had first the high rates of pay—by far the highest in Europe—and the extraordinarily liberal rations granted to the soldier; and then the separation allowances paid to his wife and family, or other dependents, on a scale hitherto unheard of, and amounting now to nearly a hundred millions sterling annually. Next we had a series of orders as to pensions for disabled men and the widows and orphans of those who die. Then came an equally progressive series of orders securing proper wages for the millions of munition workers, not only in the government's own establishments but also in the ten or fifteen thousand private establishments turned to war service. The rates of pay thus secured are, so far as the lower grades are concerned, still far from being satisfactory to the British labor movement; but their extortion from a reluctant government, and their imposition on still more reluctant capitalists, has done an enormous amount to raise the standard of life, especially among women workers. Meanwhile the government, on the successive demands of the trade unions concerned, has, at its own expense, raised the wages of the half million railway workers by ten shillings per week, amounting to about £13,000,000 a year for this industry alone; and has awarded increases to millions

of workers in private employment by orders which have the force of law, increases which are complained of as being far from sufficient, but which are, at any rate, remarkable for war time. In February, 1917, there was being ordered a legal minimum wage for all the agricultural laborers in Great Britain of twenty-five shillings per week, which is certainly 50 per cent more than the average of three years ago.

Concurrently with these increases in the income of the wage-earning families, we have had the Rent Restriction Act, which (to the financial loss of the property owners) prevents any raising of the rents of working-class dwellings above those of August, 1914; the prohibition of lapsing of industrial insurance policies of two years' standing, notwithstanding the non-payment of premiums; various measures for preventing, as far as practicable, the steadily continuing advance in the prices of commodities; and the relaxation of the rules that would have forfeited the old-age pensions of persons obtaining increased receipts from work or gifts. Finally we have had an actual increase by 50 per cent of the old-age pension now drawn by the men and women over seventy.

Meanwhile, though the taxes have been, in the aggregate, nearly trebled, the amount levied on the wage-earning class has been only moderately increased, while an addition of over two hundred and fifty millions a year has been made to the imposts levied on the employing and propertied classes, so that, what with excess-profits tax, income tax, supertax, and death duties, the richest industrial magnates often find at present three-quarters of their incomes confiscated to the service of the community.

Nothing like these things has ever before happened in the United Kingdom, either during peace or in any previous war. It is these measures, forced upon a reluctant Exchequer, owing to the way in which the British labor movement has educated and led the public opinion of the country, that have so far saved the nation—to the amazement and delight of the political economists, who never expected the workmen to manifest so much power or the government to exhibit such true economic statesmanship—from the overwhelming calamity of a fall in the standard of life.

Even more remarkable has been the extent to which, under war pressure, the British labor movement has secured, from the properties and employing classes and from the government that these still mainly control formal and official recognition as an equal partner in the state.

With the pressure for more munitions, the government called into being a whole series of special committees, both national and local, representing the trade unions concerned with the several munition industries—eventually embracing nearly all the principal manufacturing and transport trades—and obtained their advice and assistance with regard to each successive increase of governmental authority. Trade union representatives were similarly placed on the military service tribunals, which gave temporary or permanent exemption from the obligatory military service. When, in 1916, an organization was formed through the Kingdom for awarding pensions, increasing the separation allowances, and providing treatment for the disabled, the labor organizations obtained a recognition which went beyond anything hitherto accorded. In all previous cases in which labor representatives had been placed on official bodies not formed by popular election, the representatives have been chosen by the appointing authority. When the war pensions committees were formed, the spokesmen of the labor movement urged that the local trade unions and other labor bodies in each district should be formally and officially conceded, for all time, the right to be themselves represented; and that the bodies so recognized should be empowered to choose for themselves which of their members should sit upon the war pensions committees dealing with the distribution of over a hundred millions a year of public funds. To the stupefaction of the governing classes and the officials in town and country, who had hitherto often been unaware of the existence of such bodies, this right of direct representation of the local trade unions and other labor organizations of working men and women was formally and officially conceded, amid general public approval.

What is more widely known is the admission of the labor movement to partnership in the administration of the state. When in 1915 the Liberal Government gave way to a Coalition Government, the Labor Party, as a whole, was formally invited to consent to take part, its chairman being offered a seat in the Cabinet and two of its prominent members being made Under-Secretaries of State. Several other leading officials of the trade union movement were given the honorary distinction of being sworn in as members of the Privy Council. Finally, when in December, 1916, Mr. Lloyd George succeeded Mr. Asquith as Prime Minister, the adhesion of the Labor Party (though it had only thirty-five members in a House of Commons of six hundred and seventy) was recognized as essential; and

Mr. Lloyd George in a long private interview on the day of crisis personally solicited the co-operation of the party—offering the chairman a seat in the supreme War Cabinet of five members, making another Labor member Minister for Labor, and a third, Minister for Pensions; and appointing three more to subordinate ministerial positions.

3. LABOR WORKING CONDITIONS AND EFFICIENCY[1]

We may profitably consider the means by which labor is to become available and effective during the progress of the war, and at the same time discuss the measures by which labor ultimately is to receive its democratic reward for innumerable sacrifices both at home and abroad. Constructive effort, not merely after the war but as a result of the war and while the war is in progress, is the important consideration. We may rest assured that widespread and lasting improvement in labor's condition will come in two forms: first, by means of collective bargaining through trade union action, and, second, by the more comprehensive method of legal enactment, including a train of executive and administrative orders.

Others will deal sufficiently with progress toward industrial democracy through trade unionism. No one familiar with the traditions and the leadership of the American Federation of Labor will doubt that trade unionism will be pushed forward by the war. Doubtless there will come more democratic shop management, the extension of collective bargaining, and the adjustment by discussion of many of the conditions of employment, especially for the organized workers. Even though faced with peculiar difficulties, including the absorption of an army of invading women and a host of unskilled diluting mechanics, organized labor was never in a more advantageous position to assert its wishes and to have its policies adopted.

But the greatest sufferers in this war and afterward will be the masses of unorganized men and women who will only indirectly profit from the better bargains of trade unionism. For this vastly larger and comparatively helpless group, the concern of public-spirited citizens interested in the general welfare must be in that form of

[1] By John B. Andrews. Adapted from "Labor Laws in the Crucible: Measures Necessary for Effectiveness during and after the War," a paper read before the National Institute of Social Sciences, January 18, 1918.

Ed. Note.—Mr. Andrews is secretary of the American Association for Labor Legislation.

protection which is to come, not directly through the collective bargaining of the labor unions, but through the democratic expression of public opinion in our legislative halls. Political democracy, won by our forefathers and emphasized in later extension of suffrage to working men and more recently to women, is the present hope of millions of our industrial workers.

Even organized labor's "interposition" may soon take on a political form. Organized labor of our Civil War period, upon finding trade unionism unable to prevent a reduction of wages when war-priced prosperity slumped at the close of that four-year conflict, turned to politics and labor legislation. A somewhat similar political activity may now be foreshadowed by the recent change, from after-election November to the spring, of the annual convention date of the American Federation of Labor.

Fortunately, the war has placed labor legislation upon a new footing before the country. Men in high places have suddenly recognized that labor laws are not based upon mere sentiment but upon sound economics. They have joined the swelling chorus in demanding that protective standards be maintained in order that output be not decreased.

What, then, in the field of labor legislation, is especially needed and feasible in America at this moment? Fundamental, of course, is regular employment. The usual maladjustments of workers seeking individually for jobs and employers searching unsystematically for men must now be avoided. War has made the immediate adoption of a unified system of labor placement—machinery for intelligent and effective distribution of labor—a matter of national self-preservation. The labor market must be organized through a complete network of public employment bureaus.[1]

A second means of labor construction is the extension of workmen's compensation. This legislation, at first greeted with suspicion, has within a half-dozen years spread over most of the industrial states. Many inadequate laws are yet to be improved, but acceptance of the workmen's compensation principle is now almost universal. The recognition of its value may be illustrated by our experience last year with longshoremen. The United States Supreme Court, in a divided opinion, held that men loading and unloading vessels could not when injured seek compensation under the state laws. But such relief had come to be generally regarded as social justice. Longshore work is

[1] Ed. Note.—This need has now been met. See preceding selection.

particularly hazardous. Thousands of such men are seriously injured each year. These "marine" workmen, through the necessary shipment of supplies to our Allies and to our own men in France, had become in a very clear sense indispensable in this war. Thousands of them were already protesting against grievances of long duration. Here was a new grievance, the loss of compensation when injured. A bill to grant such relief was drafted by the Association for Labor Legislation, and within eleven days it was passed through both houses of Congress and signed by the President. This legal protection was necessary in order to render justice in time of peace. The progress of the war lifted it into commanding importance.

A third measure of labor construction which the war has made vitally imperative is the early development of workmen's health insurance. Hundreds of thousands of war workers are about to enter strange employments. Whether in the manufacture of munitions or elsewhere, they will be subjected to dangers with which they are not familiar. A large number of these new workers will be women, peculiarly susceptible to occupational poisons, and with maternity functions to be carefully considered with a view to safeguarding their present health as well as that of the coming generations.

The official commission which has been studying this question in New Jersey states: "The stress of industry in war is making increasing demands upon physical endurance. In our hour of necessity we have been shocked by the high percentage of draft rejections on account of physical disability. As never before we need now to conserve, for present and future generations, the health and physical vigor of our people. Furthermore, it is the duty of statesmanship to look beyond our immediate pressing needs to the period of reconstruction at the close of the war. We cannot afford to disregard the protective legislative inducements already offered to workmen by our keenest commercial competitors in Europe."

The economic advantage to a nation of a healthy, efficient, and contented working class is recognized by employers who have observed the effects of universal insurance against sickness in Germany. A former representative of large manufacturing interests who is now serving in the War Department says: "I believe very strongly that unless we make very substantial progress along the line of health insurance we shall find ourselves under very serious handicaps in world-competition at the conclusion of the present war. I believe that many of our people are still going cheerfully on with the social

ideals and ideas of the past generation quite oblivious to the fact that our great commercial competitors, Germany and Great Britain, have advanced far beyond us in social thinking. The time will come within the years immediately following the war when our 'go as you please' methods of industry will be weighed in the balance in competition with Europe."

Shortly after we entered this war the United States government provided a most liberal system of accident, health, and life insurance for its enlisted men. In support of this wise action it was frequently said by officials in Washington that men were better fighters if relieved of anxiety regarding their future. "The individual states," declares the New Jersey commission, "should be no less considerate of their army of industrial workers."

We are fighting a great world-war in order that the condition of the people may be improved. Some time this war will end. But within each nation there is a never-ending struggle for better living conditions, for opportunities for health and happiness that during generations have been denied to the workers. Today, for example, we possess a mighty power to fight disease. To the wealthy class this scientific knowledge is available; to the poverty-stricken it is doled out in charity dispensaries. But for the masses of the working population —in the United States alone among great industrial nations—such treatment is not made available. Through a properly organized system of universal health insurance it would be possible to bring the world of medical science to the aid of the humblest wage earner.

For these three important measures—public employment service, extension of accident compensation, and the adoption of workmen's health insurance—there has already been ample preparation and agreement in time of peace. While earnestly sifting new proposals for the after-war reconstruction period, no time should be lost in putting these three well-tested measures into operation.

4. EXTENT OF THE EMPLOYMENT OF WOMEN AND CHILDREN IN EUROPE[1]

The first effect in every country of the European war was a period of widespread unemployment accompanied by tremendous pressure in the few industries which were immediately necessary for war

[1] By Anna Rochester. Adapted from "Child Labor in Warring Countries," pp. 7–17, which is *Publication No. 27* of the Children's Bureau of the United States Department of Labor.

supplies. The activities of labor exchanges were extended to facilitate the distribution of labor, and in many places labor restrictions were relaxed, since this was thought necessary to intensify production. Experience proved, however, that the relaxing of standards failed of its purpose. In England and France, and more recently in Italy, after the redistribution of labor had been effected and an actual shortage of workers had replaced the earlier unemployment, definite steps were taken by the governments to restore the provisions of the labor law, because they were found to be essential not only to the conservation of the available workers but to the quantity and the quality of their output.

On the other hand some countries resisted from the beginning of the war any such breaking down of the labor law and maintained, or even advanced, their labor restrictions. No special exemptions are reported from Hungary; and, with the exception of a slight lengthening of legal overtime in the Australian State of Victoria, school-attendance and child-labor laws have not been relaxed in any part of Canada, Australia, or New Zealand. They have been strengthened during the war in South Australia and in four Canadian provinces. In England and France also official proposals have been made to reorganize and extend secondary education in ways which would directly affect the employment of children and raise the standard of their protection.

In other countries, where standards have been relaxed and no official action has been taken toward their restoration, protests and agitation by labor organizations, physicians, or social workers are reported. In Germany and in Austria-Hungary hours of labor have been shortened in certain specified industries for the sake of conserving materials. Thus, Germany in 1915 forbade night work in bakeries; limited the work in spinning, weaving, and hosiery mills to ten hours a day and five days a week; prohibited the use of power machinery for cutting textiles; and permitted the use of power machinery for sewing, buttonholing, etc., only thirty hours a week. Hungary has forbidden night work in bakeries. Austria has withdrawn the power to grant exemptions for overtime and night work in establishments using cotton, except on urgent orders for the army.

In general the relaxing of labor standards during the war has fallen into three classes.

First and most general is the lengthening of hours of work, including night work and Sunday work and more or less unlimited

overtime. Some such exemptions have been reported from England, France, Italy, Germany, Austria (but not Hungary), Switzerland, Holland, and Russia.

Second is a lowering of the age requirement for children entering industry. In this Italy has made the most general provision, permitting boys of twelve whose fathers are soldiers to go to work without regard to the educational standard formerly required of all boys under fifteen years of age. France in 1915 admitted children of eleven years and six months, instead of twelve years, to the July examination for primary certificate which would exempt from school attendance. In England local authorities in certain districts have been excusing children from the requirements of school-attendance law for agriculture and other "suitable" employments. In Germany special exemptions from the age limit for child labor are provided for in the emergency law of August 4, 1914, but how generally they have been granted does not appear.

In the third place women and young persons have been employed in dangerous, injurious, or heavy work formerly prohibited by law. The war legislation in Germany and Russia, for example, specifically provided for the granting of permission to women and young persons to work underground in coal mines. The under secretary of arms and munitions in France authorized the employment of girls under eighteen in government powder plants, from which they had formerly been excluded. In addition women have been employed in some occupations in which men only were formerly engaged and for which little or no protection was provided by law. Again, in some cases new dangers have developed for which former laws made no specific provision.

Quite as important as the temporary granting of exemptions is the postponement of laws which had been passed before the war but had not yet become effective. Conspicuous examples are the federal factory act in Switzerland which had been passed in June, 1914, and awaited the word of the Federal Council to supersede the former law; the conventions of Berne regarding night work of young persons and hours of labor for women and the use of white phosphorus, which had not taken effect in Italy when the war began; and the decree limiting the hours of labor in iron and steel industries in Germany.

The disorganization of industry and the exceptional labor conditions which have been permitted would have seriously affected the welfare of women and children even if there had been no increase in

the number at work, since even before the war they were employed extensively in the European countries. But in addition new workers have everywhere been drawn into industry during the war.

Few figures are available to show how many women and children have been drawn into gainful employment during the war by the extraordinary demand for labor which is reported for certain occupations in every country. From France, Germany, and Italy come reports of a great increase in home work, with its customary evils of long hours and low wages, in connection with army contracts for clothing and other supplies; and home work almost invariably includes the employment of children.

In all European countries the demand for children and women in agricultural work has been very great. Furloughs from school for a limited period are permitted by the school-attendance laws in France and Holland. In Russia the movement for compulsory school attendance which was under way before the war has been seriously hampered and the attendance of children who have been enrolled is reported to me more irregular than usual because of work they have to do at home and in the fields. In England certain exemptions are permitted by law and others have been granted at the discretion of the authorities. The actual number of children engaged in agricultural work cannot be estimated for any country.

An interesting sidelight on what agricultural employment of children may mean comes from Russia, where some 600 refugee children from thirteen to sixteen years of age were organized in colonies by an agency of the city council of Moscow for the double purpose of helping the peasants in their summer work in the fields and of saving the children from the harmful influences of the capital. On the basis of a medical examination the children were divided into two groups—those able to give help on farms to a great extent and those who needed rest and recuperation. The latter, making up eight out of the nineteen colonies, also worked; but it was arranged that they could only help in the household and do "light" field work such as turning hay and digging potatoes; they were not to work more than seven hours a day.

From the British board of education we learn that while ordinarily in Great Britain some 450,000 children pass out of the elementary schools annually at or about the age of fourteen the number was increased by approximately 10 per cent during the year of 1915. These additional 45,000 children were practically all legally entitled

to leave school. Further, since September, 1914, a very large number of children who were still of compulsory school-attendance ages have been excused by the local education authorities for full-time agricultural employment or (in a few cases) for suitable light employment in cities. Broadly speaking, it is probable that together these figures do not fully represent the total loss.

From various British sources come reports of high wages for boys in unskilled occupations and special complaint of the large increase of young boys in street trades. It is stated that the scarcity of boy labor has caused girls to enter occupations in which they have not formerly been employed, but the occupations are not specified. There is also the shifting of juvenile labor from one district to another in a way apparently unknown before the war.

An exodus of German children from the usual blind-alley occupations is indicated by the difficulty of getting boys for odd jobs—messengers, errand boys, and other unskilled "nomad" workers. "All young boys with any ambition now become apprentices in skilled trades because they are much needed and are paid very differently from peace-time rates; or else they become lathe workers in munition factories, or enter the postal service. Formerly the parents had to make sacrifices and pay for the instruction of the boy, but now he makes while an apprentice as much as the unskilled youthful workers used to make.

Even more incomplete are the figures available for France, Italy, and Russia. We learn from the *Bulletin du Ministère du Travail*, for example, that in April, nearly 50,000 industrial establishments, not including state-owned munition works or railways, tramways, mines, and quarries, had replaced by other workers more than one-fifth of the wage-earners who had been mobilized. These establishments had employed before the war one and three-quarter million workers of both sexes and all ages and of these approximately 420,000 men (24 per cent) had been called to the colors. In April, 1916, the places of some 87,000 had been filled, but how these new workers were distributed among men above military age, and women, boys, and girls does not appear. A marked increase of women workers on French railways is reported. For example, it is stated by the *Journal des Débats* that the percentage of women railway employees in France in November, 1916, was growing daily and had already risen to proportions varying from one in ten to one in six on different lines.

From France come reports also of women's work in furnace industries. As early as August, 1915, the bulletin of the minister of

labor stated that "Certain of the new occupations in which women are employed seem injurious to their health and under normal circumstances the question would arise whether the employment of women in these occupations should not be regulated."

In July, 1916, the French government ordered that all soldiers detailed to munition work must so far as possible be replaced by women, and even earlier it had been ordered that women should be employed instead of men in office work and house service at army headquarters. In September, 1916, the minister of munitions stated that 300,000 women had gone into the munition works, but he does not say how many of them were under twenty-one years of age.

Similar orders were issued in Italy in circulars of August 23 and September 28, 1916, which stated that by October 31, 50 per cent of the men of military age in the munition works must be replaced by women and boys, and that by December 31 the percentage must be brought up to 80. The second circular states that of the 355,349 wage earners employed at that time in 822 munition works only 45,628, or 13 per cent, were women. By December 31, 1916, according to the report of the national committee for munitions published early in the current year, the number of women employed in war industries had risen to 90,000, as against 430,000 men, or to 18 per cent of the total number of employees as compared with 4 per cent in November, 1915. In some plants the percentage of women has risen to 90 and even 95. While emphasizing the remarkable rapidity of this increase, the report points out the necessity of a much more general displacement of men by women, discusses the growth of technical training schools for women munition workers, and expresses the expectation of a continually increasing response of Italian women to the needs of the war industries. How far this expectation has been realized, material available in this country does not yet show.

As in France, so in Italy the employment of women in auxiliary army services has been encouraged. Clerical work, kitchen work, laundry work, general cleaning and other work in military hospitals, and clerical work in territorial offices are especially referred to.

The only Italian figures received concerning the employment of boys during the war refer to munition works in Lombardy. They are based on reports from 660 factories employing about 100,000 workers in June, 1914, and 145,000 workers in June, 1916. The number and percentage of boys employed was small and showed little change; 1,297 boys under 21, or 1.28 per cent, were employed in 1914, and 2,076 boys under 21, or 1.42 per cent, in 1916. On the other hand,

the number of women and girls in these plants had more than tripled and the percentage of women and girls among all workers had risen from 4.77 per cent, in 1914, to 9.97 per cent in June, 1916. This indication of the slight employment of boys in comparison with that of women and girls is borne out by the report of the national committee for munitions.

General references are found in Russian publications to the substitution of children for older workers but no data are available as to the industrial occupations in which they are most largely employed. Street trading by young children has increased and some as young as five years of age are said to be engaged in this work.

In spite of her neutrality the Netherlands has, of course, been deeply affected by the war. As industrial life has gradually adjusted itself to these war conditions and to the mobilization of the army, there has been on the one hand continued unemployment and on the other a slight increase in child and woman labor. This increase has been especially marked in certain industries. The proportion of women and girls among all wage earners in industrial establishments employing more than 25 persons rose from 20 per cent in May, 1914, to 22 per cent in May, 1916. The number of young children twelve and thirteen years of age who were at work had decreased in 1913 and again in 1914. The number rose again in 1915 but did not reach the total reported for 1912 or 1913. A census of all industries shows from 1914 to 1916 an increase of 3 per cent in the employment of boys under seventeen years of age, of 16 per cent in the employment of women seventeen years of age and over. The increase in the employment of men seventeen years of age and over in the same period was only 2 per cent. In the clothing trades and the metal industry, including shipbuilding, these percentages of increase are much higher.

5. MEDIATION IN WAR TIME[1]

1. The commission had wide opportunities, both as to the extent of territory and the variety of industries investigated, to inquire into industrial conditions in war time. The commission visited Arizona,

[1] By Felix Frankfurter.

Ed. Note.—The report of the President's Mediation Commission to the President of the United States, January 9, 1918. The report is signed by W. B. Wilson, *Chairman*; Ernest P. Marsh; Verner S. Reed; Jackson L. Spangler; John H. Walker; Felix Frankfurter, *Secretary and Counsel;* and Max Loewenthal, *Assistant Secretary*. This is a summary of the Commission's conclusions.

the Pacific Coast, Minneapolis and St. Paul, and Chicago; studied the situation in the copper mines, the telephone industry, the Northwest lumber industry, the meat-packing industry as centered in Chicago, the rapid-transit situation and the related industrial condition in the Twin Cities, and observed as well other industries in the states adjacent to those it visited. All relevant sources of information were tapped, for close contact was had with workmen on strike and at work; employers and professional men and federal and state officials, who are brought particularly in touch with labor matters; and in addition, the voluminous official files of federal and state authorities furnished much knowledge. While undoubtedly each industry presents its own peculiarities, certain underlying general factors applicable to all industry emerge from the three months' work of the commission.

2. Throughout its inquiry and in all its work the commission kept steadily in mind the war needs of the country. The conclusion cannot be escaped that the available man power of the nation, serving as the industrial arm of war, is not employed to its full capacity or wisely directed to the energies of the war.

3. The effective conduct of the war suffers needlessly because of (*a*) interruption of work due to actual or threatened strikes; (*b*) purposed decrease in efficiency through the "strike on the job"; (*c*) decrease in efficiency due to labor unrest; and (*d*) dislocation of the labor supply.

4. These are not new conditions in American industry, nor are their causes new. The conditions and their causes have long been familiar and long uncorrected. War has only served to intensify the old derangements by making greater demands upon industry and by affording the occasion for new disturbing factors.

5. Among the causes of unrest, familiar to students of industry, the following stand out with special significance to the industrial needs of war:

a) Broadly speaking, American industry lacks a healthy basis of relationship between management and men. At bottom this is due to the insistence by employers upon individual dealings with their men. Direct dealings with employees' organizations is still the minority rule in the United States. In the majority of instances there is no joint dealing, and in too many instances employers are in active opposition to labor organizations. This failure to equalize the parties in adjustments of inevitable industrial contests is the central cause of

our difficulties. There is a commendable spirit throughout the country to correct specific evils. The leaders in industry must go farther, they must help to correct the state of mind on the part of labor; they must aim for the release of normal feelings by enabling labor to take its place as a co-operator in the industrial enterprise. In a word, a conscious attempt must be made to generate a new spirit in industry.

b) Too many labor disturbances are due to the absence of disinterested processes to which resort may be had for peaceful settlement. Force becomes too ready an outlet. We need continuous administrative machinery by which grievances inevitable in industry may be easily and quickly disposed of and not allowed to reach the pressure of explosion.

c) There is a widespread lack of knowledge on the part of capital as to labor's feelings and needs and on the part of labor as to problems of management. This is due primarily to a lack of collective negotiation as the normal process of industry. In addition there is but little realization on the part of industry that the so-called "labor problem" demands not only occasional attention but continuous and systematic responsibility, as much so as the technical or financial aspects of industry.

d) Certain specific grievances, when long uncorrected, not only mean definite hardships; they serve as symbols of the attitude of employers and thus affect the underlying spirit. Hours and wages are, of course, mostly in issue. On the whole, wage increases are asked for mostly in order to meet the increased cost of living, and such demands should be met in the light of their economic causes. Again, the demand for the eight-hour day is nation wide, for the workers regard it as expressive of an accepted national policy.

6. Repressive dealing with manifestations of labor unrest is the source of much bitterness, turns radical labor leaders into martyrs and thus increases their following, and, worst of all, in the minds of workers tends to implicate the government as a partisan in an economic conflict. The problem is a delicate and difficult one. There is no doubt, however, that the Bisbee and Jerome deportations, the Everett incident, the Little hanging, and similar acts of violence against workers have had a very harmful effect upon labor both in the United States and in some of the allied countries. Such incidents are attempts to deal with symptoms rather than causes. The I.W.W. has exercised its strongest hold in those industries and communities

where employers have most resisted the trade-union movement and where some form of protest against unjust treatment was inevitable

7. The derangement of our labor supply is one of the great evils in industry. The shockingly large amount of labor turnover and the phenomenon of migratory labor means an enormous economic waste and involves an even greater social cost. These are evils which flow from grievances such as those we have set forth; they are accentuated by uncontrolled instability of employment. Finally, we have failed in the full use and wise direction of our labor supply, falsely called "labor shortage," because we have failed to establish a vigorous and competent system of labor distribution. However, means and added resources have recently provided for a better grappling with this problem.

8. It is then to uncorrected specific evils and the absence of a healthy spirit between capital and labor, due partly to these evils and partly to an unsound industrial structure, that we must attribute industrial difficulties which we have experienced during the war. Sinister influences and extremist doctrine may have availed themselves of these conditions; they certainly have not created them.

9. In fact, the overwhelming mass of the laboring population is in no sense disloyal. Before the war labor was, of course, filled with pacific hopes shared by nearly the entire country. But, like other portions of the citizenship, labor has adjusted itself to the new facts revealed by the European war. Its suffering and its faith are the suffering and the faith of the nation. With the exception of the sacrifices of the men in the armed service, the greatest sacrifices have come from those at the lower rung of the industrial ladder. Wage increases respond last to the needs of this class of labor, and their meager returns are hardly adequate, in view of the increased cost of living, to maintain even their meager standard of life. It is upon them the war pressure has borne most severely. Labor at heart is as devoted to the purposes of the government in the prosecution of this war as any other part of society. If labor's enthusiasm is less vocal, and its feelings here and there tepid, we will find the explanation in some of the conditions of the industrial environment in which labor is placed and which in many instances is its nearest contact with the activities of the war.

a) Too often there is a glaring inconsistency between our democratic purposes in this war abroad and the autocratic conduct of some

of those guiding industry at home. This inconsistency is emphasized by such episodes as the Bisbee deportations.

b) Personal bitterness and more intense industrial strife inevitably result when the claim of loyalty is falsely resorted to by employers and their sympathizers as a means of defeating sincere claims for social justice, even though such claims be asserted in time of war.

c) So long as profiteering is not comprehensively prevented to the full extent that governmental action can prevent it, just so long will a sense of inequality disturb the fullest devotion of labor's contribution to the war.

The causes of unrest suggest their own means of correction.

1. The elimination to the utmost practical extent of all profiteering during the period of the war is a prerequisite to the best morale in industry.

2. Modern large-scale industry has effectually destroyed the personal relation between employer and employee—the knowledge and co-operation that come from personal contact. It is therefore no longer possible to conduct industry by dealing with employees as individuals. Some form of collective relationship between management and men is indispensable. The recognition of this principle by the government should form an accepted part of the labor policy of the nation.

3. Law, in business as elsewhere, depends for its vitality upon steady employment. Instead of waiting for adjustment after grievances come to the surface there is needed the establishment of continuous administrative machinery for the orderly disposition of industrial issues and the avoidance of an atmosphere of contention and the waste of disturbances.

4. The eight-hour day is an established policy of the country; experience has proved justification of the principle also in war times. Provision must of course be made for longer hours in case of emergencies. Labor will readily meet this requirement if its misuse is guarded against by appropriate overtime payments.

5. Unified direction of the labor administration of the United States for the period of the war should be established. At present there is an unrelated number of separate committees, boards, agencies, and departments having fragmentary and conflicting jurisdiction over the labor problems raised by the war. A single-headed administration is needed, with full power to determine and establish the necessary administrative structure.

6. When assured of sound labor conditions and effective means for the just redress of grievances that may arise, labor in its turn should surrender all practices which tend to restrict maximum efficiency.

7. Uncorrected evils are the great provocative to extremist propaganda, and their correction would be in itself the best counter-propaganda. But there is need for more affirmative education. There has been too little publicity of an educative sort in regard to labor's relation to the war. The purposes of the government and the methods by which it is pursuing them should be brought home to the fuller understanding of labor. Labor has most at stake in this war, and it will eagerly devote its all if only it be treated with confidence and understanding, subject neither to indulgence nor neglect, but dealt with as a part of the citizenship of the state.

6. A WAR-TIME LABOR POLICY[1]

The commission of representatives of employers and workers, selected in accord with the suggestion of your letter of January 28, 1918, to aid in the formulation, in the present emergency, of a national labor program, present to you, as a result of their conferences, the following:

a) That there be created, for the period of the war, a National War Labor Board of the same number and to be selected in the same manner and by the same agencies as the commission making this recommendation.

b) That the functions and powers of the National Board shall be as follows:

1. To bring about a settlement, by mediation and conciliation, of every controversy arising between employers and workers in the field of production necessary for the effective conduct of the war.

2. To do the same thing in similar controversies in other fields of national activity, delays and obstructions in which may, in the opinion of the National Board, affect detrimentally such production.

3. To provide such machinery by direct appointment, or otherwise, for selection of committees or boards to sit in various parts of

[1] A report made to the Secretary of Labor, March 29, 1918, by the War Labor Conference Board.

Ed. Note.—This is the basis of our national labor policy and is comparable "so far as American conditions make it comparable" with the English Treasury Agreement, later embodied in the Munitions Bill.

the country where controversies arise, to secure settlement by local mediation and conciliation.

4. To summon the parties to the controversy for hearing and action by the National Board in case of failure to secure settlement by local mediation and conciliation.

c) If the sincere and determined effort of the National Board shall fail to bring about a voluntary settlement, and the members of the Board shall be unable unanimously to agree upon a decision, then and in that case, and only as a last resort, an umpire appointed in the manner provided in the next paragraph shall hear and finally decide the controversy under simple rules of procedure prescribed by the National Board.

d) The members of the National Board shall choose the umpire by unanimous vote. Failing such choice, the name of the umpire shall be drawn by lot from a list of ten suitable and disinterested persons to be nominated for the purpose by the President of the United States.

e) The National Board shall hold its regular meetings in the city of Washington, with power to meet at any other place convenient for the Board and the occasion.

f) The National Board may alter its methods and practice in settlement of controversies hereunder, from time to time as experience may suggest.

g) The National Board shall refuse to take cognizance of a controversy between employer and workers in any field of industrial or other activity where there is by agreement or Federal Law a means of settlement which has not been invoked.

h) The place of each member of the National Board unavoidably detained from attending one or more of its sessions may be filled by a substitute to be named by such member as his regular substitute. The substitute shall have the same representative character as his principal.

i) The National Board shall have power to appoint a secretary and to create such other clerical organization under it as may be in its judgment necessary for the discharge of its duties.

j) The National Board may apply to the Secretary of Labor for authority to use the machinery of the Department in its work of conciliation and mediation.

k) The action of the National Board may be invoked in respect to controversies within its jurisdiction by the Secretary of Labor or by

either side in a controversy or its duly authorized representative. The Board, after summary consideration, may refuse further hearing if the case is not of such character or importance as to justify it.

l) In the appointment of committees of its own members to act for the Board in general or local matters, and in the creation of local committees, the employers and the workers shall be equally represented.

m) The representatives of the public on the Board shall preside alternately at successive sessions of the Board or as agreed upon.

n) The Board in its mediating and conciliatory action, and the umpire in his consideration of a controversy, shall be governed by the following principles.

PRINCIPLES AND POLICIES TO GOVERN RELATIONS BETWEEN WORKERS AND EMPLOYERS IN WAR INDUSTRIES FOR THE DURATION OF THE WAR

There should be no strikes or lockouts during the war

Right to organize.—1. The right of workers to organize in trade unions and to bargain collectively, through chosen representatives, is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the employers in any manner whatsoever.

2. The right of employers to organize in associations or groups and to bargain collectively, through chosen representatives, is recognized and affirmed. This right shall not be denied, abridged, or interfered with by the workers in any manner whatsoever.

3. Employers should not discharge workers for membership in trade unions, nor for legitimate trade union activities.

4. The workers, in the exercise of their right to organize, shall not use coercive measures of any kind to induce persons to join their organizations, nor to induce employers to bargain or deal therewith.

Existing conditions.—1. In establishments where the union shop exists the same shall continue and the union standards as to wages, hours of labor, and other conditions of employment shall be maintained.

2. In establishments where union and non-union men and women now work together, and the employer meets only with employees or representatives engaged in said establishments, the continuance of such condition shall not be deemed a grievance. This declaration, however, is not intended in any manner to deny the right, or discourage the practice, of the formation of labor unions, or the joining of the same

by the workers in said establishments, as guaranteed in the last paragraph, nor to prevent the War Labor Board from urging, or any umpire from granting, under the machinery herein provided, improvement of their situation in the matter of wages, hours of labor, or other conditions, as shall be found desirable from time to time.

3. Established safeguards and regulations for the protection of the health and safety of workers shall not be relaxed.

Women in industry.—If it shall become necessary to employ women on work ordinarily performed by men, they must be allowed equal pay for equal work and must not be allotted tasks disproportionate to their strength.

Hours of labor.—The basic eight-hour day is recognized as applying in all cases in which existing law requires it. In all other cases the question of hours of labor shall be settled with due regard to governmental necessities and the welfare, health, and proper comfort of the workers.

Maximum production.—The maximum production of all war industries should be maintained and methods of work and operation on the part of employers or workers which operate to delay or limit production, or which have a tendency to increase artificially the cost thereof, should be discouraged.

Mobilization of labor.—For the purpose of mobilizing the labor supply with a view to its rapid and effective distribution, a permanent list of the number of skilled and other workers available in different parts of the nation shall be kept on file by the Department of Labor, the information to be constantly furnished, (1) by trade unions; (2) by state employment bureaus and federal agencies of like character; (3) by the managers and operators of industrial establishments throughout the country. These agencies should be given opportunity to aid in the distribution of labor, as necessity demands.

Custom of localities.—In fixing wages, hours, and conditions of labor regard should always be had to the labor standards, wage scales, and other conditions prevailing in the localities affected.

The living wage.—1. The right of all workers, including common laborers, to a living wage is hereby declared.

2. In fixing wages, minimum rates of pay shall be established which will insure the subsistence of the worker and his family in health and reasonable comfort.

XIII

THE COSTS OF THE WAR

Introduction

In the nature of things it is as yet impossible to present accurate, quantitative data on the costs of the war. Tentative estimates only may be made of the losses that are entailed in wealth and population. This chapter, therefore, has as its chief purpose an analysis of the nature of war costs and the significance of these costs for the future of society.

As the readings show, there is great danger in attempting to measure the costs of the war in terms of money. The monetary figures of war costs appear literally staggering, and to one who thinks of war debts as sums of money which must be paid by certain nations to other peoples it would appear that the debts of the war could not be paid in countless generations. As Section LXI shows, however, these monetary figures of war debts are entirely misleading. If we consider the world as a whole, it is apparent that the combined debts of the contending belligerents are not owing to the people of other planets. The people of the world as a whole, as indicated by the Treasury statistics of the various nations, owe the people of this world as a whole certain staggering amounts of wealth, expressed in monetary terms. The Treasury statements are thus only bookkeeping records; they register in a financial way how much of the goods and services of the various nations has during the war been devoted to public rather than private ends. At the end of the war the payment of these debts does not involve a net reduction in the total wealth of the world; it means merely that the governments of the various nations will collect, through taxation of the people, funds which will in turn be paid back to the people—that is, to the owners of government bonds and other obligations. Now, if all contributed equally to the financial support of the war, and if post-bellum taxes were levied in exact proportion to the bond holdings of those who had financed the war, the payment of the debts would be merely a balancing of the books and would be without economic significance except in so far as it required

a large force of people to collect the revenue, make the disbursements, and keep the necessary financial records.

In so far, however, as the individuals of any nation contribute to the financing of war in differing proportions, these war debts do involve readjustments in property and income among the various groups of people, although in terms of totals the figures would indicate the real nature of war costs no more than before. It should be added that where one nation borrows from another as a means of financing a war, the problem is also different. England, for instance, will have to pay its debts to the United States. This will make the English people poorer, and the people of the United States more affluent to a like degree.

The real costs of the war must be measured in other than monetary terms. In brief, the social costs (Section LXII) consist in a lessened supply of capital goods; in exhausted resources in land and raw materials; in decimated and impoverished populations—impoverished in the sense of being undernourished and in subnormal health conditions; in the arrested training and development of the youth of the land; and in the suspended cultural progress of the race.

But there are offsetting gains. Ultimate considerations (selection LXII, 4) raise the question whether, all factors considered, the war will not have paid for itself in spite of the enormous costs which it entails. It is a question here of balancing gains and losses; and, since so many of the factors are of an incommensurable sort the question must perforce be left unanswered. Chapter xiv, however, attempts an appraisal of the war's lessons in the principles of national efficiency, for peace as well as for war's requirements.

If the war is brought to the kind of termination which would incorporate the principles that have been so strongly enunciated by the President, the gains from this world-cataclysm will undoubtedly, in the end, outweigh its awful losses. Everything thus depends upon the nature of the peace which is to follow. It is the purpose of chapter xv to present some of the factors which are incident to an enduring peace.

LX. Quantitative Measurement of War Costs

1. WHAT DO WE MEAN BY WAR COSTS?[1]

What is meant by the costs of war? It is obvious that a distinction must be made between the money costs and the real costs of a war. The money costs of a war are the actual outlays of the government for war purposes; that is, the surplus above the general expenditures in time of peace, making due allowance for changes in the purchasing power of money. The real costs of a war, on the other hand are to, be calculated very differently. When the ordinary man speaks of wealth, he thinks of accumulated capital. The more sagacious thinker, however, is aware that the real wealth of a community consists in larger part of the results of current production. Accumulated capital is of importance chiefly as an aid to current production. It has been calculated that the world is always within a year and a half of starvation. If current production were suddenly to cease, the world's stores of food and other products would barely suffice for eighteen months. A wealthy country is one where the consumption of the people is great and variegated and where the current production is so large that there will still be a substantial surplus susceptible of being converted into capital for future production and into an environment which will spell increasing welfare and civilization. A great war interferes rudely with the results both of past accumulation and of current production. The real costs of a war are to be measured by the diminution of the social patrimony and by the diversion of current social output from productive to unproductive channels, i.e., by changes both in the fund of accumulated wealth and in the flow of social income.

In drawing up the balance sheet we should have to put on the one side the diminution of the fund of wealth as represented by (*a*) the destruction of private property; (*b*) the loss of government accumulations; (*c*) the impairment of natural resources; and (*d*) the decrease in the social output due to the reduction of the labor force by military service and the fortunes of war. On the other side of the ledger, indeed, we should have to put such capital items as (*a*) indemnities or booty, and (*b*) the acquisition of new territory; and on the income side, the results of (*c*) speeding up of production, (*d*) the more

[1] By Edwin R. A. Seligman (see p. 409). Adapted from "Loans versus Taxes in War Finance," *Annals of the American Academy of Political and Social Science*, LXXV (January, 1918), 53–54.

favorable economic situation attained by the political results of the war, and (*e*) changes in the methods of industry and the relation of capital and labor which may conduce to greater efficiency and increased output.

Although not all of these items are susceptible of being put in terms of dollars and cents, the real costs of a war may be characterized as the balance of the debit side over the credit side in the above account.

2. PECUNIARY COSTS OF THE EUROPEAN WAR[1]

It is now possible to bring together the final figures for all the belligerent countries and to estimate the total cost of the war for the three years and five months of its continuance—from August 1, 1914, to December 31, 1917.

If the annual national income of the more important countries is compared with the cost of the war for the last calendar year, 1917, the real burden of the war in made apparent. It will be noticed that in some cases the war is already costing more in a single year than the estimated incomes of the whole people, and in all the others except the United States it is approaching very close to this point. Only in the case of this country do there remain any appreciable resources which may yet be drawn upon to defray future costs. The following table gives these figures.

ANNUAL NATIONAL INCOME AND WAR-EXPENDITURES

Country	Annual National Income	War Expenditures for 1917
United States.....	$38,000,000,000	$ 9,000,000,000*
Great Britain.....	10,700,000,000	11,300,000,000†
France.....	7,300,000,000	6,720,000,000
Russia.....	6,500,000,000	10,000,000,000
Italy.....	4,000,000,000	2,800,000,000
Germany.....	10,500,000,000	9,300,000,000
Austria-Hungary..	5,500,000,000	5,000,000,000

* Estimated for twelve months on the basis of nine months' actual expenditures, allowance being made for progressive monthly increase.

† Exclusive of loans to Allies.

[1] By Ernest L. Bogart. From a monograph with the above title in Volume 5 of the series *Preliminary Economic Studies of the War*, pp. 41–43. Copyright by the Carnegie Endowment for International Peace, 1918.

ED. NOTE.—Mr. Bogart is Professor of Political Economy at the University of Illinois.

In conclusion it should be noted that the costs thus far tabulated are only the direct money outlays of the countries involved. They do not take into account the indirect costs, such as the destruction of property, the depreciation of capital, the loss of production, the interruption to trade, etc. It has been estimated that these amount to as much again as the direct costs. This would raise the total cost to all the belligerents to $335,000,000,000. And in this staggering total are not included the expenditures or losses of neutral nations, which have been very real and in some cases very serious, nor the loss of human life.

On the other hand, certain deductions may be made which reduce somewhat the real costs. In the first place, not all of the war expenditure is pure loss. Some expenditures are simply transferred from family budgets to that of the state. Soldiers are fed, clothed, and housed at the expense of the government and the bill is paid out of taxes or loans. Other expenditures are positively productive, such as the building of railways or merchant vessels. And in the second place it is quite obvious that a partial explanation of the growing costs of the war lies in the depreciation of the money unit. Measured in dollars the expenditures are mounting steadily and rapidly. Measured in terms of services and commodities the increase is much less rapid. It has been estimated by the editor of the London *Statist* that "the net cost of the war to the belligerents is about one-half of its total cost." If this generalization be accepted as correct and one-half of the direct cost be subtracted there is left as the real economic cost of the war thus far $176,700,000,000.

3. COSTS IN MEN[1]

	United States	Great Britain (Not Including Colonies)	France	Russia	Italy
Original man power, ages 18–45	22,000,000	12,000,000	9,000,000	34,000,000	8,000,000
Present man power, ages 18–45	22,000,000	11,000,000	6,500,000	30,000,000	7,700,000
Total men enlisted since war began	2,000,000	6,000,000	9,000,000	14,500,000	3,300,000
Present men enlisted	2,000,000	5,000,000	6,000,000	9,000,000	3,000,000
Present-enlistments percentage of present man power	9.09	45.45	92.31	30.00	38.96
Men killed		298,988*	1,580,000	2,062,064	130,356
Percentage of total enlistments		4.98*	17.56	14.22	3.95
Seriously wounded		177,224*	921,328	1,223,476	60,840
Percentage of total enlistments		2.95*	10.24	8.44	1.84
Captured or missing		182,452*	696,548	1,243,096	68,292
Percentage of total enlistments		3.04*	7.74	8.57	2.07

	Germany	Austria-Hungary	Entente Allies	Central Powers	Grand Total Entente Allies and Central Powers
Original man power, ages 18–45	14,000,000	12,000,000	85,000,000	26,000,000	111,000,000
Present man power, ages 18–45	9,400,000	11,150,000†	77,200,000	20,550,000†	97,750,000†
Total men enlisted since war began	10,500,000	7,000,000	34,800,000	17,500,000	52,300,000
Present men enlisted	7,000,000	4,000,000	25,000,000	11,000,000	36,000,000
Present-enlistments percentage of present man power	74.47	35.87	32.87	53.53	36.83
Men killed	1,980,800	849,368	4,071,408	2,758,168	6,829,576
Percentage of total enlistments	18.18	12.13	11.70	15.76	13.06
Seriously wounded	958,612	540,673	2,382,868	1,499,285	3,882,153
Percentage of total enlistments	9.13	7.72	6.85	8.67	7.42
Captured or missing	704,128	833,644	2,190,388	1,537,772	3,728,160
Percentage of total enlistments	6.71	11.91	6.29	8.79	7.13

* Includes British colonies. † Includes Turkey and Bulgaria.

[1] These figures, published July 28, 1917, are estimated at the end of the third year of the war, and are given in the *New York Times Current History*, September, 1917.

LXI. War Debts and War Costs

1. GERMANY ON THE VERGE OF BANKRUPTCY[1]

The total note issues of the Reichsbank itself at the end of February, 1918, had reached $2,693,000,000, largely through discount operations in Imperial Treasury bills. The Reichsbank discounted about one billion more of these bills in 1917 than in 1916.

Besides the circulation of the Reichsbank the issues of the *Darlehenskassen* amounted on March 7 to $1,900,000,000, which gives a total of $4,593,000,000 paper money in circulation. By comparing that sum with the $472,700,000 notes that the Reichsbank had outstanding in July, 1914, one gets "a good measure of the road that Germany had traveled over in the direction of irredeemable paper." It shows that for every dollar of paper circulating just before the war the circulation now carries $9.73 in paper.

To see on what thin ice Germany is skating, let us compare this huge volume of paper money with the gold stock of the Reichsbank. The whole volume of paper money must be taken, inasmuch as the Reichsbank is responsible for the operations of the *Darlehenskassen*, which are carried on as mere annexes to it. Against the total of notes above mentioned of $4,593,000,000 the Reichsbank held at the end of February only $573,000,000 in gold. In other words, if the Reichsbank were called upon to redeem these notes in gold it would pay slightly less than 12½ cents on the dollar.

And the ominous thing for Germany is that this process has by no means run its course as yet. It has gone from bad to worse, with the worst still to come. The note circulation of the Reichsbank alone increased since a year ago by $762,000,000, while that of the *Darlehenskassen* has been expanded by more than $500,000,000 since the end of last October. On the other hand, the gold stock of the Reichsbank is moving in the opposite direction; it is now nearly $30,000,000 less than a year ago.

It would not be possible to establish any trustworthy standard by which to measure the depreciation of German paper money. The ratings of its value vary greatly in the small neutral countries adjacent to Germany; and no uniform valuation can be arrived at by comparing them.

[1] By William C. Dreher. From the *New York Tribune* as summarized in *Business Digest*, May 22, 1918.

Ed. Note.—Mr. Dreher was a representative of the Associated Press in Germany and did not leave there until after the United States entered the war.

The interest charges alone by the end of April this year will have reached $1,450,000,000 a year, rather more than less. Dr. Helfferich has estimated something like $1,900,000,000 to $2,000,000,000 as the amount which before the war represented the annual savings of the people, or what they had left over for investments of all kinds. Of that sum they put about $720,000,000, in 1912, into stock-exchange securities of all classes, which was "less than half of the present interest on the national debt." The rest went into other securities, building operations, investments abroad, and miscellaneous channels. These figures give a result that is ominous for the German people, showing, as it does, a debt cost already of from 72 to 76 per cent of their savings in a year of great prosperity. By the end of this year, however, if the war still goes on and the monthly rate of war expenditure remains at the $893,000,000 recently admitted by Count Rödern, "the annual interest charge will rise to 90 or 95 per cent of their savings in 1912."

This fact is already looming large in the minds of German financial authorities. But the interest charge will not represent the only financial burden laid upon the German people by their military lords. There will be a huge pension appropriation every year for many years to come. At this time the number of soldiers killed in battle or lost through wounds or disease must exceed 1,250,000, and may even reach 1,500,000; and doubtless an equally large number have been either wholly or partly disabled. The widows and children of deceased officers and men might easily exceed 3,000,000. Thus the roll of pensioners must draw itself out to a stupendous length. And niggardly as is the scale on which Germany pays pensions, especially to the disabled common soldier and his dependents, the total outgo in pensions must reach, as some good German authorities estimate, as much as $700,000,000 a year. But that is not all. Provision will have to be made for the gradual extinguishment of the huge national debt. Financial writers generally assume that the amortizations must reach at least $600,000,000 a year. Now, if these German assumptions be correct, what do they mean? They mean that the German people will have to meet annually an outgo of $2,750,000,000, or some $750,000,000 to $850,000,000 more than their aggregate savings in 1912. And almost the whole of that enormous sum represents the heritage left them by this war.

George Bernhard has recently said in a public lecture that the total taxation—national, state, and municipal—will reach $3,100,000,000. But this estimate is too low. Count Preysing said in the

Bavarian Reichsrat that the total will reach $4,640,000,000, or four times as much as before the war. Thus there is high official authority for saying that Imperial expenditure after the war will be from $1,230,000,000 to $1,330,000,000 greater every year than the aggregate savings of the people before the war. And all this is just a snapshot taken of this growing snowball of debt as it rolls past us at this moment. But it is rolling on, its volume increases daily, there is no end in sight.

2. GERMANY'S WAR DEBTS NOT WHAT THEY SEEM[1]

Germany's approaching financial bankruptcy has been widely discussed in financial circles of late and many incline to the belief that her staggering debt will force a military collapse in the near future. The figures which are quoted to show that the interest on Germany's debt is substantially equal to, if not in excess of, her income, however, are almost entirely beside the point. The fundamental fallacy involved in these figures is that only one side of the financial accounting is considered.

It must be borne in mind that Germany is not financing this war by borrowing from outsiders. It is practically all being done through domestic loans and taxes. When it is pointed out therefore that the interest charges which Germany has to meet each year are $1,500,000,000, or more, one must reflect that this interest is received by the German people as well as paid by the German people. Similarly, when it is argued that an enormous tax will have to be levied after the war to pay pensions, it must again be reflected that the government in its financing is merely transferring funds from German people to German people. Under these circumstances, national debts owed to the nation's own citizens are merely paper claims of the individuals of the state to the existing supply of national wealth and to future national wealth. The treasury financial statements amount merely to bookkeeping, showing the distribution of ownership among German citizens of present and future national income.

War finance may give to certain classes of people a larger proportion of the national wealth than before; it may give to others less. But by itself, domestic borrowing has no direct effect upon the nation's real wealth. The costs of war to a nation are not to be measured in terms of money. They must be measured rather by the deterioration of plant and equipment, by the exhaustion of natural resources, and

[1] An editorial.

by the loss of new capital which would have been created had not war diverted the energies of the people from construction to destruction. Thus measured Germany will be seen to be far from bankrupt, for she still has close to 70,000,000 of people, including prisoners of war; she still possesses her original agricultural area, though doubtless somewhat impaired as to fertility; she still possesses her factories and her railroads, though they are somewhat the worse for wear and tear; and she still possesses her basic supplies of raw materials from which are wrought the instruments of warfare. Indeed, as a result of conquests attained, many of these resources have been increased a hundred fold, and the question of their utilization is only one of effective organization, which in time can be given them.

It cannot be too strongly emphasized that the Teutonic power of resistance does not depend upon finance. The German organization through central administration has directed a certain percentage of the energy of the Teutonic power to the fighting units on the various fronts; a certain percentage to the production of munitions and other army supplies; a certain percentage to the construction of submarines; and a certain percentage to the production of foodstuffs. The German power of resistance depends, therefore, upon the ability of the armies in the field to hold the lines; upon the ability of the agricultural quota to produce enough food to sustain life and physical efficiency; in short, upon the working strength of each part of the great national machine.

LXII. The Social Costs of the War

1. FALLACIES ABOUT THE COST OF WAR[1]

Against the main proposition that war is a destructive and therefore an impoverishing agency, from which a general decline of comfort and prosperity must result, three fallacies have been invented to misdirect the pilgrim on his quest for truth. The first is that war increases wealth by circulating money; the second, that it increases wealth by creating a demand for the things it has destroyed; the third is that it increases wealth by reducing unemployment.

The idea that war increases wealth by circulating money is based upon a confusion between money and wealth. It is quite true that

[1] By F. W. Hirst. Adapted from *The Political Economy of War*, pp. 122–28. E. P. Dutton Co., 1915.

Ed. Note.—Mr. Hirst is a well-known English writer upon economics and was for many years editor of the *London Economist*.

war multiplies and debases the currency, because the issue of new currency is the most obvious and the easiest method by which a government can pay for troops and supplies. The poorer the government, and the greater the expense of a war, the more paper and token money will it seek to circulate. If the identification of wealth with money meant the identification of wealth with gold, the doctrine that war increases wealth by circulating it is manifestly absurd. For in the Great War which broke out in the autumn of 1914 all the belligerents except Great Britain immediately abandoned the gold standard, and even the British government issued a considerable quantity of paper money which took the place of a proportionate amount of gold sovereigns and half-sovereigns.

The second fallacy starts from the undoubted fact that some of the things which war destroys are bound to be replaced. We say *some*, because the work of replacement either during or after the war depends upon the power to replace. If in a modern war a village or small town, with all its churches, farmhouses, factories, villas, and cottages, is totally annihilated by shells, and all the inhabitants are killed there is no probability of replacement. If the inhabitants all escape, some of them are sure to return to the ruins after the war, and those who have independent means may sell or borrow on securities in order to rebuild and restore what has been destroyed. It is obvious then that only a fraction of the visible property destroyed by war can be restored. What that fraction is will depend upon the wealth of those who remain and upon the credit of the government. Thus when a country has been devastated, as Poland, Serbia, Belgium, and East Prussia have been devastated, an effort will undoubtedly be made after the war by public and private credit to restore with all possible speed such primary necessities as railways and railway equipment, farms, cottages, factories, and the like. If by indemnity or otherwise a large quantity of money can be raised for these purposes, a certain temporary stimulus will be given to the iron and steel trades and to the manufacture of machinery and implements in countries where the means of producing steel rails, girders, machinery, furniture, and implements of all kinds are still intact. But to argue that this sort of *post bellum* stimulus to industry proves the economic desirability of war is exactly like arguing that drunken undergraduates, when they break windows in a university town, are creators of wealth merely because the owners of the houses, or the insurance companies, or the parents of the undergraduates are well enough off to pay the glaziers of the town for replacing the broken windows.

The third fallacy that war is good for trade because it reduces unemployment or increases employment is closely related to that which we have just been considering. As a matter of fact war diverts employment from productive to destructive arts. It enormously reduces employment in peace industries and enormously increases it in war industries. Thus at the beginning of the Great War of 1914 vast numbers of able-bodied men were thrown out of employment in Great Britain by the curtailment of foreign trade and domestic consumption. But all and more than all these were quickly absorbed in the army, or in the work of producing supplies, armaments, and ammunition of all kinds for the fighting services, with the result that in a few months' time the trade union returns showed an unusually low rate of unemployment. The explanation is simple enough. The government was borrowing about two millions sterling a day, which sum was supplying the means of employing in the army and the armament factories men and women for whose products after the outbreak of war there would have been little or no peace demand. When orders poured in from the governments of France and Russia a positive congestion arose, with overtime, shortage of hands, and transport difficulties of all kinds.

It must be clearly understood that in refuting the three fallacies we are in no way concerned to deny that many individual traders, shipowners, and financiers may and do make fortunes out of war. Ministers and public servants are surrounded by men who know how to pick up the crumbs that fall from the table of a vast and ill-controlled public expenditure. In time of war able and respectable men of business may become bankrupts while worthless favorites and corrupt contractors make money very quickly. In the management of war finance at its best incompetence is too often matched against roguery. And there may be not merely incompetence but negligence or something worse in the public offices. It was so in the war with the American colonies, in the war with Napoleon, in the Crimean War, and in the South African War. You may eliminate waste and corruption in one form, but they will reappear ere long in another. In computing the real cost of war to a nation allowance should perhaps be made for these war fortunes, which resemble the sums won by a gambler. But a more important extenuation of national losses is to be found in the diminution of private luxury which a great war entails, especially in countries like Great Britain where it is accompanied by the screwing up of a stiffly graduated income tax and death duties, and by the additional taxation of alcoholic liquor.

Another plea in extenuation of war needs consideration, though it does not quite deserve a place beside the three fallacies. It is this—that the pressure of war taxation and the withdrawal of so much labor from field and factory forces many people to work who never worked before and induces many more to work harder. Women and children and old men are forced into employment so that national production is stimulated. Indeed, economic professors have been heard to declare in all seriousness that the total income of a country after a great war may through this cause be greater than ever, so that a nation may in an economic sense be more than compensated for its losses by its losses! Even during the long years of distress that followed the Napoleonic wars one or two writers tried to console the public for the severity of taxation by the thought that it forced people to work harder than they would have done.

And so we return to the proposition that war while it enriches a few impoverishes the many. In his Glasgow lectures Adam Smith put it in a few sentences which deserve repetition: "The poverty of a nation proceeds from much the same causes with those which render an individual poor. When a man consumes more than he gains by his industry, he must impoverish himself unless he has some other way of subsistence. In the same manner, if a nation consume more than it produces, poverty is inevitable; if its annual produce be ninety millions and its annual consumption an hundred, then it spends, eats and drinks, tears and wears ten millions more than it produces, and its stock of opulence must gradually go to nothing."

Then in reply to the objection, advanced perhaps by some youthful heckler, that there is no harm in spending money on war so long as you spend it at home and employ home manufacturers, the philosopher continued: "Suppose my father leaves a thousand pounds' worth of the necessaries and conveniences of life. I get a number of idle folk about me, and eat, drink, tear, and wear till the whole is consumed. By this I not only reduce myself to want, but certainly rob the public stock of a thousand pounds, as it is spent and nothing produced for it." In the same way money spent on war is wasted wherever the war is waged and wherever the money employed in preparations is laid out. These propositions should be translated into every language and written up in gold over the door of every spending authority in the world; for there is no more insidious fallacy than the fallacy that waste is profitable if it provides employment at home. The taxpayer suffers equally whether a superfluous battleship, or fort, or barrack is built at home or abroad, by British or foreign labor.

Nor does it in the long run make any difference whether money borrowed for unproductive purposes is raised by a foreign or a domestic loan. In either case the home taxpayer has to pay the interest; which, unless the capital be paid off or repudiated, constitutes a perpetual charge on the trade and industry of the country.

2. SOME ECONOMIC CONSIDERATIONS[1]

The material waste and destruction of this war, with its ever-increasing area of conflict, have been far greater, more various, and more widespread than would have been thought possible before the actual event. At the outset most economists in this and other countries predicted exhaustion of one or both belligerent groups before two years were passed. The actually available resources of every country have proved to be far greater than was supposed. What this country [England], in particular, has done amounts to an economic miracle. With some four million men taken from ordinary occupations for the fighting forces, and two more millions for munitions, we have been able somehow to maintain the ordinary productive operations of our country at so high a level as to provide food, clothing, vehicles, and innumerable other expensive articles for our own forces and a large surplus for our Allies; while our civil population as a whole has been living upon a somewhat higher level of material comfort than before.

There are those to whom the obvious explanation of the miracle is that we are living on our capital, and they insist that we shall have to pay afterwards for this necessary extravagance. Now living upon capital from the standpoint of a nation may mean one or the other of two things, or both. It may mean that we have destroyed, damaged, or diminished the plant, buildings, roads, stocks, money, which we possessed in this country before the war, together with the foreign securities which represented claims upon real wealth in other countries. Or it may mean that we have mortgaged abroad portions of the wealth we shall produce after the war, by obtaining upon credit foreign goods to supplement our war deficiencies. If either of these things has occurred, it will seem to involve a diminution in our national income after the war—a measure of poverty.

[1] By J. A. Hobson. Adapted from "Shall We Be Poorer after the War?" *Contemporary Review*, CXI, 43–47. Copyright 1917 by the Contemporary Review Company, Ltd.

Ed. Note.—Mr. Hobson is one of the leading British economists of this generation.

It is manifest that our war economy will have caused a letting down of most of those forms of fixed capital which can be let down without great immediate damage to their productive services. Repairs and renewals, both of public and private fabrics of a durable kind, have been postponed, industrial machinery and other plants have been injured by overwork and neglect. It is estimated that a sum of from 170 to 180 million pounds per annum represented industrial wear and tear and renewals, or approximately one-tenth of the industrial income of the nation. A considerable part of this expenditure, no doubt, has been suspended—i.e., the work that would have gone for this purpose has been diverted into work for the production of immediately consumable wealth. This damage to future productive power is enhanced by a letting down of many stocks of materials, unfinished or finished goods, which in ordinary times constitute a reserve of national wealth to meet the sudden enhancements of demand, and to secure the required elasticity of trade. These stocks, both in this country and throughout the world, have been largely depleted to meet the urgent needs of the belligerent nations. Their reduction must rank as an expenditure out of capital which will have to be made good before trade can be fully restored. This expenditure of capital is probably the most serious incurred by this country. So far as the income-earning power of our capital is concerned, the letting down of plant and stock is the measure of the direct damage to capital due to the war. Against it may be set an estimate of the new engineering and other plants brought into existence, primarily for war requirements, but capable of adaptation to peace industries afterwards.

The large sale of American and other foreign securities, and the loans effected in the United States and in our Dominions, no doubt involve an expenditure of past capital and a mortgage of future resources. But regarded from the national standpoint, what has taken place may fairly be treated as a shifting of securities. We have sold securities and raised credits in America in order to make financial advances of at least equal magnitude to our Allies. The interest on this sum will represent a net reduction of the annual income of our nation available for distribution here so long as this method of payment is continued.

Summarising the evidence we have cited, we may fairly conclude that the material capital of this country will emerge from the war not seriously damaged or diminished. Indeed, it may plausibly be

argued that the better organization of industry for obtaining a fuller use of the existing plant—e.g., the introduction of a shifts system into processes where plant was lying idle for the greater part of the time—may almost compensate for the admitted loss by letting down fixed capital and stocks. In a word, the supply of available industrial capital for this country after the war will not be so greatly diminished as to necessitate a total output of industry appreciably lower than it was before the war.

How, next, will it fare with the other factors of production? Will the supply of labour be reduced by the ravages of war? The loss of life and the disablement will amount to a heavy total. Perhaps it may represent a million men, or one-sixth of those withdrawn from ordinary civil occupations. But this would not mean a corresponding reduction of effective labour. There are several compensations here. First comes the stoppage of all British emigration during the war. At least half a million workers who would have gone abroad will have been kept at home. It may, indeed, be admitted that the tide of emigration after peace will carry away large numbers both of our civilians and of disbanded soldiers. But the pace of this movement will be restrained by reduced facilities and enhanced costs of transport, as well as by the lack of the money usually required to make emigration a success for men untrained in agriculture. Another compensation is to be found in the newly discovered and trained powers of women. Though many of the six hundred thousand who have already entered munitions and other industrial occupations will doubtless return to domestic work, the ranks of labour will be enlarged permanently, not merely by those who, having already entered, will remain, but by a constant flow of new female labour into occupations for the first time opened by the war. Women have discovered new aptitudes and new confidence in exercising them. Their status in industry has definitely and permanently risen. It is no mere question of numbers. Both for women and for unskilled men the artificial barriers which precluded them from learning and undertaking large numbers of skilled occupations have been broken down. After the war the proportion of workers, male and female, possessing approved skill in some productive process will be greatly increased. This, of course, is equivalent to an enlargement of the effective productive power of the nation. It may be concluded that the aggregate labour-power available after the war will be quite as great as that available in the summer of 1914, assuming that the war is not prolonged beyond next summer.

Business ability and enterprise in the organising and employing classes ought to be enhanced rather than diminished by the lessons in adaptation and experimentation imposed by the stress of war needs. Rapid transformations of plant and premises, novel technical processes, revolutionary changes in finance, control, organisation of labour have everywhere been shaking the easy-going, slack, routine ways and notions of employers. Thousands of them have been compelled for the first time in their lives to "look alive" and stir their intellectual stumps. The great revelation of what could be done to maintain and enhance productivity under the spur of national necessity can never perish from our minds. We now know that with the material and human resources at our disposal it is technically possible, when the war is over, to begin producing industrial wealth at a considerably faster rate than it was produced three years ago. The great economies effected by reducing our railways to a single system are only one striking example of an economy of capital and labour which will certainly be conserved in the future.

3. WAR AND POPULATION[1]

The suggestions of the following paragraphs are not put forward as prophecies, but rather to indicate some of the possibilities which may have to be dealt with when the great conflict comes to an end and the processes of readjustment begin.

The direct effects of the war upon the populations of the belligerent nations are but too terribly apparent. Not only have deaths and incapacitating casualties run into the millions; not only is there this enormous loss of numbers—the wastage has been so concentrated among males of fighting age as to work a serious distortion of the population structure. Economically, the proportion of producer to consumers has been reduced. Biologically, the balance of the two sexes is disturbed in the reproductive years of life and the capacity of monogamic increase is correspondingly impaired. Even though birth-rates may nevertheless rally at the close of the struggle, this disproportion of ages and sexes cannot thereby be corrected. It will leave its disfiguring and disabling effects for decades to come.

Nor will the present population alone bear the scars. If there is any significance in heredity, and any truth in the contention that

[1] By James A. Field. From "Problems of Population after the War," *American Economic Review*, VII, Suppl., 233–34. Copyright by the American Economic Association, 1917.

Ed. Note.—Mr. Field is professor of political economy in the University of Chicago.

modern warfare accomplishes an adverse selection through the slaughter of the physically bravest and best, then the new generation, and through it posterity, must be the continuance of an impoverished breed. This, too, is a damage that mere volume of births can hardly mend. The two inches of average stature which the French people is said to have lost in the Napoleonic wars were lost in spite of a tolerably vigorous revival of the birth-rate after those devastating campaigns. And though we may question whether the selective agency of war operates with such obvious effect upon the human characteristics of body and mind that most concern us, we cannot well doubt that lasting modifications of our racial endowment are now in process on the battlefields of Europe. It does not follow that deterioration will be at once manifest when the next generation succeeds to leadership in Western civilization. Indeed, it is more to be feared that civilization may conform itself imperceptibly to the lowered standards of a depleted stock. In any event, history that might have been is now cut off with the lives of those whose unborn descendants would have made it.

4. ULTIMATE CONSIDERATIONS[1]

It is difficult to appraise the real cost of war. A recital of the figures of war debts only serves to conceal the truth. On the purely material side, the best we can do is to ascertain the extent of the loss of new capital and the amount of depreciation of the existing industrial equipment of the national resources of a nation. On the human side, we can determine the number of casualties, but it is impossible to measure the different values to the community of those who are killed. A genius lost involves an immeasureable cost viewed in national terms. The loss of an ordinary soldier is relatively inconsequential.

But quite apart from the loss of life, war entails enormous sacrifices in human resources. The sacrifice in health of the men who have been for years in the trenches cannot be measured in terms of money, for there is no satisfactory method of reducing the values of human lives and human health to pecuniary terms. The war has also impoverished the people of many lands and this carries with it a real lowering in the standards of life. There is less food, bodies are less adequately protected with clothes and shelter; medical service is scarcer, and in general conditions are less conducive to healthful

[1] An editorial.

living. Future generations of Belgians, Roumanians, Poles, Russians, Turks, Armenians, and Persians, not to mention others, will pay the penalty of this generation of economic disorganization. Preventive measures can alleviate somewhat the future wretchedness which is the product of war, but it cannot eliminate it entirely. Children will be reared undernourished and without proper medical attention, entailing costs that will manifest themselves in succeeding ages. Moreover, the bodies of the mature population, under the intense strain of a long war, become less immune to the ravages of disease. The lowering of health standards and the lessening of human vitality tend to have viciously cumulative effects; for the war necessitates low standards of living, low standards of living cause low productivity, and low productivity in turn causes low standards of living for long years to come. Poland, for instance, has been impoverished by the war to an extent that renders it almost impossible to gain the initial momentum necessary to recuperation and to return to erstwhile living conditions.

Even in countries such as England and the United States, which do not bear the brunt of invasion, and where the economic organization is such as to prevent starvation, or even a serious lessening of national vitality, there are still serious costs to be reckoned with. The lowering of labor standards carries with it, unless our standards were false, serious impairment of efficiency as measured in terms of long-run national considerations. Much of the labor of women now used in factories will carry with it its meed of cost in shortened lives and in ill-health in the years to come. The increasing employment of children and the curtailment of education among the youth prevent a development of the full resources of the coming generation of manhood and womanhood. In a less obvious way there is a great social sacrifice involved in the diversion of energy from scientific pursuits, from social study and investigation, from art and literature, to immediate material pursuits of military importance. The sort of life which conditions the element of genius and originality is almost prohibited, for genius and originality can usually ripen only amid leisure; the world of ideas and values out of which an improving society eventually comes is almost at a standstill during the war.[1]

[1] This of course does not apply to experiments in governmental control of industry. It is possible, too, that the inventions called forth for use in the war may result in great ultimate value for times of peace. The statement has been made, however, by those in position to know, that few great inventions have thus far come from the laboratories of war.

Another of the immeasurable costs of war lies in the fact that war arrests the training of the future leaders of a nation. Business responsibilities, and the necessity of keeping the home fires burning, make it impossible to send a large proportion of the mature men of a nation to war. It is the youth who must bear the brunt of the conflict. A nation is thus stripped of the services of those who would naturally be the future leaders in community and civic enterprise. Even with those who return, the years spent in the army have cost them in many instances the labor and study which otherwise would have been spent in cultural, technical, and vocational training, and it hence tends to lessen their efficiency for leadership in the future. This is doubtless offset to some extent by training which the war itself offers in developing alertness and resourcefulness; but the specialization of the present war coupled with the predominance of trench warfare probably renders such training less valuable than in former wars. Particularly is this true in view of the fact that the social phenomena of the complicated world of today require training and study of a very different sort from what was required for leadership under more primitive conditions of existence.

The war affects the temper and character of life in many ways. It profoundly modifies the habits, practices, customs, and ideals of the civilian population as well as of those actively engaged in the conflict. Some of these changes are bad, many of them are good, and it is possible that the ultimate results in the way of new social values may quite offset the immediate losses occasioned by war. It is impossible to make at this time a full recital of the changes which the war has wrought in our social and economic life, but they are everywhere in evidence. For instance, we have become reconciled, at least for the period of the war, to a control of industrial activities on the part of the government which would have been unthinkable in this individualistic country only two years ago. Not all of this will be retained in the peace which is to follow, but it is evident that we will have a much larger measure of governmental direction than we have had in the past.[1] Much of the experience of the war in governmental control may be utilized in ways that will promote long-run welfare in the years of peace. For instance, it appears that the federal organization of the labor market which the war has

[1] See chapter xiv for a consideration of the gains which may come out of the war in the way of more efficient organization.

effected[1] is a piece of machinery so essential to the successful working of our industrial system that it will never be given up. We have also come to appreciate more fully than before the importance of large national production, and a useful distinction has been drawn between essentials and nonessentials, which may prove serviceable in peace as well as in war.

A subtle change which the war has wrought is to be found in the increasing number of women employed in industry. Their active participation in the affairs of a world-wide economic society makes a return to the old-fashioned cloistered American home almost impossible. The situation carries with it far-reaching implications in the matter of family ideals and the organization of domestic life around the hearthstone. Who can say whether this will lead to ultimate gains or to ultimate losses?

These are but a few examples of the many changes which the war is effecting. They relate not only to the elements of our life and its organization but also to its ideals. Our standards of judgment are very different from what they were before the war and since values and costs can be measured only in these social standards, it is impossible to make an accurate statement in quantitative terms of the ultimate costs of the war. Indeed, in view of these changing standards it is impossible to tell whether, all factors considered, and looking into the far distant future, the war has entailed a net cost to society. It depends upon which scheme of things one prefers in life, and, as ever, *de gustibus non disputandum est.*

[1] See selection LVIII, 6.

XIV

WAR'S LESSONS IN THE PRINCIPLES OF NATIONAL EFFICIENCY

Introduction

There are two sets of factors which are difficult to harmonize in the modern industrial state. One consists of the technical demands of an efficient producing machine; the other of the psychological needs of the men who must work the machine without becoming mere cogs in it. At present technical efficiency calls for increased centralization of a sort that can most quickly and simply be attained through what labor stigmatizes as "state socialism." On the other side stands the imperative need of giving the increasing power of labor effective channels of expression, and satisfying its twofold demand for more goods and more voice in the control of industry. Of the two, the former is the easier for the economist to reason about, but the latter is the more vital. Unless a spirit of co-operation can be established, labor will go back to the restriction of output, and we shall be back in a "vicious circle" of inefficiency which will make satisfactory conditions for the masses well-nigh impossible of attainment. The harmonizing of these demands is the great task of reconstruction.

LXIII. Industrial Gains from War[1]

Mr. Arthur Greenwood discusses the effects of the war on capital, management, and labor. As regards the first, the shortage of labor resulted in the improvement and the use of machinery being widely extended, new plants being laid down, and new buildings being erected. Management in its turn, previously "overstaffed and underworked," reorganized itself on a basis of great efficiency; it sought new forms of capital, developed the subdivision of labor, and rearranged processes and workshops.

Of labor serious sacrifices were asked. Notwithstanding that workers had enlisted in hundreds of thousands, labor's contribution

[1] Adapted from "The Reorganization of Industry in Great Britain," *Monthly Review of the Bureau of Labor Statistics* (1917), pp. 331–33.

to production must be not only maintained but increased. It would be possible to enlarge the output by the existing supply of workers toiling harder and for longer hours, or by the dilution of labor through the employment of semiskilled workers for certain kinds of skilled work and of people who had not been employed or had already left industrial life.

But such changes could not be made without the co-operation of labor, and appeal was made to the trade-unions to give up their most cherished achievements. Accordingly, trade-union regulations were set aside, the right to strike was sacrificed over a large part of industry, compulsory arbitration was accepted, and industry came to be conducted on the basis of the agreement between the trade-unions and the government, together with the legislation dealing with the munition industries.

On their part, the trade-unions desired certain safeguards. It was agreed, therefore, that the changes made should not prejudice wage rates; that due notice should be given of further alterations in working conditions; that priority of employment after the war should be given to the workmen affected by the change; and, most important of all, that after the war there should be in every case the restoration of previous conditions.

With regard to the last provision the author points out that the economic system, under the pressure of war, has increased its efficiency of production over a fairly large range of industries and an enormous number of people have increased their industrial experience and efficiency.

"Women transport workers, clerks, and shop assistants, and semiskilled men and women have widened their experience during the war, and a large number have gained facility in the handling of machines. All these people will remain as a body of workers more efficient and more experienced than they were before the war. Knowledge of up-to-date and more efficient methods will be more widely spread. The experience which employers have gained during the war regarding the possible productivity of labor, the value of further specialization of labor, and the economy of machinery will not be blotted from their memories when the war comes to an end. Rather will there be a strong desire to make the industrial system a more efficient instrument of production than it has been in the past—a desire which will be strongly re-enforced by the cry of foreign competition and by the fight for world trade. But even if the pressure

of circumstances were not immediately overwhelming, war-time developments will sooner or later become a guide to industrial organization." Only by act of Parliament, rendering illegal for a term of years the practices which have come into operation during the war could the changes which have been made be rendered null, and such a law would not be practicable.

LXIV. Some Economic Gains from the War[1]

One of the most remarkable economic lessons of the war has been its revelation of the reserve forces of national credit. Is it not reasonable to suppose that the financial powers of the state, so successfully mobilized in the autumn of 1914 for the support of the shattered fabric of private finance, can be made available for the purposes of assisting industrial and commercial recovery after the war? Already the proposal of a state-assisted financial corporation for the acquisition of new foreign markets has received much support in influential quarters. Assuming that the war is brought to a successful end at no distant date, our national credit will emerge not seriously impaired, and though there may be heavy demands upon it during the period of reconstruction, any failure of our private banking system to respond adequately to the needs of the economic situation will certainly evoke an imperative demand that state credit shall be utilized again to meet the grave emergency that would arise if capital and labor should be prevented from producing wealth through deficiency in the monetary apparatus of the country.

But though all the separate factors of production may suffice—plant, labor, directing energy, and credit—there remains the grave question: Can they be kept in effective co-operation? For several years before the war industry was in a state of unprecedented disturbance by reason of the conflicts between employers and workers in the fundamental trades. The root of the trouble was the recent stoppage of that general improvement in wages and working-class standards of comfort which had been going on for several decades, and the actual fall of real wages which had taken place in many staple trades by failure of wage-rates to keep pace with the continuous rise of prices. Now, shall we be able to look forward to such peaceful relations between capital and labor after the war as will stimulate

[1] By J. A. Hobson (see p. 552). Adapted from "Shall We Be Poorer after the War?" *The Contemporary Review*, CXI, 552, 47–53. Copyright, 1917, by the Contemporary Review Co., Ltd.

both employers and workers to co-operate energetically in adopting the improvements of scientific, mechanical, and business organization needed for effective production? No simple, confident reply can be given to this question. The affirmative answer seems to me to depend upon the successful solution of two problems, at first sight separate, but afterwards seen to be closely related. A prime need of the economic situation for the industrial world as a whole, and for this country, will be the need of more saving—i.e., the application of a larger amount of productive energy to the making of roads, railways, ships, machinery, buildings, and the replacement everywhere of depleted stocks of materials. For though the material equipment of this country may not have suffered heavy damage as a whole, there will be a great deal of new capital expenditure involved in restoration and adaptation to the new conditions, and our nation will have to play a considerable part in the larger task of restoration in Belgium, France, Poland, Serbia, and other war-broken lands. Moreover, it will be difficult and unwise to ignore the calls of South America and other distant lands, dependent on the stream of capital from us for the development of world resources upon which we shall need to draw ever more abundantly, lands which have been starved of this fertilising stream during the years of war. We must, therefore, considerably increase the total volume of our annual savings. If we saved 400 millions before the war, we must save at least 500 or even 600 millions afterwards. On the face of things this does not seem impracticable, or particularly difficult, on the assumption that production goes on fully and smoothly. For a strong stimulus to saving will be present in the shape of a high rate of interest, and the distribution of wealth will apparently be favorable to the process. High taxation will no doubt appreciably reduce the amount thus available for private saving. But that portion of public revenue expended upon housing, education, and other productive services may reasonably be reckoned as economic savings. If, as is likely, the state goes into business upon a far larger scale than hitherto, nationalising the railroads, and perhaps the mines and the liquor trade, enlarging the functions of the post office, and taking on large departments of insurance and finance, the increased capital needed for such expansions will be a compulsory saving exacted by taxation. But however the task may be accomplished, the essential point is that more saving will have to take place than before the war.

Does that mean that a larger *proportion* of the general income must be saved—i.e., that a larger *proportion* of the annual product

must be in the shape of capital goods, a smaller in the shape of consumable goods? Must we reduce consumption in order to get the larger saving we require? Let me put the issue even more sharply. In order that interest may be high, must wages be low? For if out of a given annual product more must be saved, then less must be spent; if interest and profits are raised, wages must be lowered. This is what many people think must, and will, happen. During the war labor has been made artificially scarce by enlistment and enormous government contracts. So employment has been full and wages high. After the war labor will be abundant and government contracts will stop. So employment will be slack and wages low. Some will add that, even if this slackness of employment can be avoided and industry can be actively resumed, high interest and high taxation must take so large a share of the product that real wages must be low. Now either form of this argument brings us to an *impasse*. For much as the economic necessities of the situation are seen to demand a higher rate of saving than before the war, they can also be seen to demand a higher rate of real wages, a higher standard of working-class consumption. This may not be taken to be an economic necessity. It may be said that the rate of real wages before the war, or even a lower rate, can be adequate to support the workers in reasonable efficiency until a period of reconstruction has passed and times warrant a return to the tradition of working-class progress.

But this evades the real issue, which is one not primarily of economic but of psychological necessity. The workers will not consent to return after the war to steady and pacific co-operation with capital in a new era of progressive industry, unless they are assured wages and other conditions of employment more favorable than prevailed before the war. The experiences of war time will have convinced both the workmen who have fought and those who have stayed at home that industry can afford a higher standard of wages. If the nation has been able to afford the gigantic extravagances of this war, and, at the same time, to maintain the working classes at a higher level of consumption than before out of the current output of wealth (with six million men withdrawn from production), it will be idle to attempt to persuade them afterwards to submit to a cutting down of standards on the plea that industry cannot support the higher rates. Any doubt that may exist upon this matter will be quickly resolved by the first attempt to impose upon any great organised trade a reduction of wage-rates. The tone of the working classes after the war is not

likely to be one of submissive apathy. It is likely to be one of irritability and suspicion. The projects which employers and officials are canvassing so busily for introducing scientific management, business syndication, compulsory arbitration, profit sharing and bureaucratic socialism, with the laudable object of enhancing productivity and reducing friction, are already beginning to stir uneasiness among the more forward-looking labour leaders. They seem to see an attempt to impose upon the workers from above an organization of industry in which the will and interests of the employers will operate through the machinery of government with the new militarism in reserve for a final guarantee of industrial peace. These suspicions are likely to spread rapidly during the preliminary period of resettlement, unless employers and the government make some genuine effort to enlist the active co-operation of trade unions and other working-class bodies, accompanied by explicit guarantees for wages and employment, and a substantial share in the government of industry, so far as it affects the interests of labour. In order to raise the technique and organisation of our industry to a higher level, the workers must be got to see their own substantial gain from the enhanced productivity to which their labour is required to contribute.

The net result of this general analysis is that, if we are to escape becoming poorer after the war, we must become richer. This is not the empty truism it may at first appear. It signifies in the first place that a mere return to the standard and volume of production of wealth before the war is impossible. For out of the after-war production a far larger amount will have to be taken for interest and dividends. Moreover, apart from the payment of war expenses in the shape of interest on loans and sinking fund, the needs of public revenue for social services, and probably for the maintenance of an expensive army, will involve a larger total burden of taxation than before the war. These enhanced payments to capital, fund-holders, and the state would involve a heavy reduction of real wages, if the total production were no greater than before the war. But labour, as we diagnose the case, would not consent to such reduction. If it be said that the operation of economic principles would compel labour to submit to the inevitable, I would reply that the evidence does not show this course to be inevitable. There is an alternative course, viz., so to raise the total productivity of industry as simultaneously to provide out of the enlarged output of annual wealth the increased aggregate of interest and public revenue, together with a higher standard of

wages and consumption for the working classes. The economic stimuli of production brought into operation during war time show the possibility of increased production even under an improvised organisation. Our supreme task must be to devise stimuli which, though less acute in their appeal than those supplied by the emergency of war, shall yet in peace be adequate to operate successfully in a carefully reformed organisation of industry, in which the interests of all participants—capital, labor, ability, and the consumer—shall be duly represented. If these changes in our industrial arrangements for producing and distributing wealth amount to a revolution, better this sort of revolution than the other sort, which history teaches us may follow war.

LXV. The Theory of National Efficiency in War and Peace[1]

I. WAR AND SOCIAL READJUSTMENT

The idea that war sidetracks social reform bids fair to become one of the world's exploded fallacies. It is true that social reform demands attention and war diverts attention elsewhere—social reform is expensive and war leaves us with no resources to spare. The implication is either, (1) that social reform is an unproductive luxury, or (2) that it is productive only of long-run results too distant to play any part in winning the war, or (3) that it is regarded in one or the other of these lights by those who will have the say in deciding what is to be done.

If social reform aims to free men from the need of hard and conscientious work it is an expensive luxury, and we cannot afford it in time of war. But if social reform means increasing control by society over industry and other private activities, for the furthering of society's ends; if it means an attack on undue inequalities of wealth, active supervision of profits, wages, and consumption, and active endeavor by society as a whole to increase industrial efficiency, this kind of "social reform" is the sort it is a luxury to do without. And when the pinch of a national emergency becomes very severe, and we must become an efficient nation whether we want to or not, we cannot afford to do without those kinds of social reform that stand for collective efficiency. Germany has taken the lead in social insurance and prevention of unemployment, not because Germany is more

[1] By J. Maurice Clark. Adapted from "The Basis of War-time Collectivism," *American Economic Review* (December, 1917), pp. 772–90.

humanitarian than other countries, but because she cares for economic efficiency on a national scale.

Now war has forced the democratic countries to an accounting of human life and welfare on the same basis which Germany seems to have followed as a matter of nationalistic policy.

The nation that contemplates war cannot afford to see the health of its citizens wasted by the accidents, diseases, and other unpaid damages of industry, or, in fact, in any other way. And it cannot afford to see their moral unity shaken by the bitterness which those who have suffered crippling loss and misfortune feel toward the classes who have been more fortunate or toward the state which has shown no adequate sense of responsibility for such regular and inevitable wreckage of human life. It might almost seem that militarism has set a higher value on human health and welfare than industrialism, and if that be true, so much the better for militarism. But we are rapidly coming to the conclusion that industrialism can no more afford these wastes than militarism can. What the war has done is to force upon us in unmistakable form the need of expanding our thinking to a scale as wide as the nation's whole needs, its whole resources, and everything that affects them for good or for ill.

II. COMPETITIVE EFFICIENCY VERSUS NATIONAL EFFICIENCY

A. What does society want?—When war demands that all the productive force we can spare be put into its workshops, these forces must be diverted from the pursuits of peace. Where we follow the method of private enterprise in making the transfer, the government finds itself not merely paying men to make munitions and so turning productive forces in that direction, but, to just the extent that it pays extra high wages to munition makers, it places them in a position (of which they do not neglect to take advantage) to *bid with their own pocketbooks against the government by hiring as much labor as they can command to make for them the cigars, victrolas, pianos, and other unaccustomed luxuries which their high wages enable them to afford.* And this paradox is quite characteristic of the methods of unco-ordinated individualism when used to mobilize a nation's resources to meet a supreme and all-absorbing national need.

If the free-exchange way of doing things is so absurdly organized that it tends partly to defeat its own ends in the fashion just indicated, why is not this just as true in peace time as in war? One reason why high wages do not defeat the national purpose in time of peace is,

(1) that luxuries for wage earners are in themselves a large part of the national economic purpose and, (2) that the nation is as ready to produce them for one group as for another, and those who command high wages are *ipso facto* the elect. In time of peace the nation wants few things *as a nation*. The public defense is cared for with a relatively small expense, and all the needs that are general enough to be met by government agencies—federal, state, or local—absorbed less than one-tenth of our people's expenditure before the present war. The rest goes for things that individuals want and purchase, as individuals, and if the community has any community interest that is served by the goods its members buy, it leaves that interest in the care of the members, each of whom seeks his own interests and appropriates to the furthering of each of these interests as much of the nation's productive power as the force of his wants dictates and the length of his pocketbook permits. As between satisfying the wants of different individuals, society apportions its energies according to their purchasing power, which they may have acquired through efficiency in the service of other people's wants, through hard work or talent exercised in ways that do not contribute a corresponding net addition to other people's gratifications, through good fortune, or through a prudent choice of parents.

If Smith can persuade people that they want just the particular kind of hat he knows how to make, he appears at the same time to be persuading society that it wants Smith, who is well nourished and well clothed, to have a victrola, in preference to giving the Jones family, who are undernourished, a little more substantial food. Say that he is able to buy four times as much as Jones, or virtually, to have four men like Jones working for him all the while. Are the four men that work for him less efficient for that reason than other men who are producing more necessary things for people no richer than themselves? On the basis of the happiness of the greatest number, where "every man counts as one," the men serving Smith are inefficiently employed, unless the ultimate result of their serving Smith is to get people like Jones more goods than they could have if Smith did not get his extra share. Smith's extra share is his incentive to make hats that people will buy, and without some such incentive he might not take the trouble to make such good hats or to bring them to people's attention. We take for granted that his reward should consist in having more money than other people to invest or to spend for necessities, comforts, luxuries, or vices, as he chooses. But should it?

Or should the absolute necessities be distributed equally to all, and the rich man get his reward only in such things as are not pre-empted for this necessity budget? Society has never voted on this question; it has merely allowed the present system to grow up of itself.

The nearest thing to a judgment we have is the commonly accepted principle of equality of opportunity and inequality of reward, according to the unequal use made of the opportunities in serviceable work. Strictly speaking, this is an impossible ideal, since spending is itself an opportunity to give oneself better training, better food, more safety from infection, a broader outlook, paid assistants to relieve him of detail work, and all the thousand and one things that can make a man more effective as a producer. What is really meant is, in substance, that there shall be enough equality of opportunity so that some poor men as well as rich men can rise, and that poor and rich shall have an equal chance except so far as poverty is in and of itself a handicap and riches in most cases in and of themselves an advantage. But this exception is a big one and is growing bigger all the time, as industrial success comes to demand more training and connections and access to the more expensive parts of society's accumulations of technical knowledge. Left to itself, inequality of reward destroys equality of opportunity.

So much for the division of goods between different persons. In the choice between different goods for each person, the persons choose for themselves, first, because they are supposed to do it on the whole better than others could do it for them and, second, because anything else would mean paternalism or slavery, not freedom, and because it is better to learn by one's mistakes than to be forbidden to make any. This position is a dangerous half-truth. It neglects the fact that there are really two divisions of consumption—the basic necessities and the surplus—and that it is only for the surplus that these arguments for free choice have full force. It also ignores the fact that the individual does not ever choose independently. He may not be coerced but he is always guided—he is always waiting and wanting to be told or persuaded what to want, or guided by custom or example. Hence the only question is, What sort of guidance shall dominate—custom, or disinterested instruction, or persuasion from those who have an interest in selling him things?

Guidance of consumers is carried on as a matter of private business by thousands of agencies, each working against the others, and producing a net result far less valuable than the sum total of their

individual efforts would lead one to expect. The consumer is exposed to much repetition of mutually inhibitory stimuli, and in place of information he can trust, he must do the best he can with the light he can get from salesmen and advertizers, whose statements he is generally too canny to believe fully, even though they may in some cases be true. Thus the consumer, ostensibly the ultimate directing force in our economy, being himself somewhat imperfectly directed at the expense of a surprisingly large percentage of our total working energy, exercises his guiding influence on production through his spending power.

This is probably the best way of handling the surplus, barring avoidable wastes in salesmanship, because the surplus is a matter of taste or of having a good time, and these are, fortunately, not standardized commodities. No public bureau can lay down the canons for all. Moreover, the surplus is always expanding, so that we are constantly devising new enjoyments, wrestling with the incidental misfits and unforeseen drawbacks and damages that go along with these untried enjoyments; it makes the whole process of assimilating them a groping, unstandardized welter of conflicting tastes, uninformed experiments, and all are stages of the social process of trial and error.

The necessities are a different story. Here we are dealing with elemental needs which all share in common and of which science can speak objectively. "Necessities" are, first of all, those things that are necessary to physical health, which is a perfectly definite thing, definable by the doctor in terms of the absence of any "abnormal" or "pathological" condition. Psychological well-being and willingness to serve also come into the calculation, and a certain amount of "good time" may be necessary on that score; but the individual is no longer, as before he seems to have been, the final judge of how much of other values he shall sacrifice to the good time he wants to have on any particular Saturday afternoon. Thus in any sudden need for retrenchment, in war or peace, our attention is necessarily focused on things which are matters of objective standards rather than subjective preferences. Calories and protein units are objective tests of food, and its suitability to the diet of various kinds of invalids and semi-invalids is a matter of objective tests. But taste is not, and price is not so far as price reflects taste. The necessity-economy is standardizable while the surplus-economy is unstandardizable—the one is an economy of objective tests, the other an economy of subjective

preferences. And wherever there is an objective standard which the trained scientist can apply, the scientist can prescribe for the man in the street better than the man in the street can prescribe for himself.

But does this justify enslaving the individual to the dictates of the scientist? In most cases it need not go so far as that, for no sane person wants to be unhealthy, he merely needs to be educated. If the funds devoted to display advertising were devoted to a disinterested campaign of information and education it might well produce a revolution in standards of consumption. Some control can be exercised without the victim's knowledge; for example, how many Americans know that they are being compelled to buy day-old bread by order of government? Absolute prohibition need never be employed in enough cases to make an appreciable percentage reduction in the number of choices the individual is free to make for himself.

B. The theory of competitive production.—So much for society's wants; how about the process of getting them satisfied? This is done chiefly by means of private business enterprise, in which every man works for his own interest as hard as he can, lawfully and honorably. The general idea of our law is to prevent anyone from injuring anyone else (so far as this can be prevented by law), and to leave him free to further his own interest in any other way he chooses. Honor and morality enforce this same obligation in many delicate relationships which law is too clumsy to reach, and are a vitally necessary part of our system of social control. I cannot enslave my fellow-men and make them work for me, nor take their goods without their consent. The only way I can get them to work for me is to work for them in return, and I can get their goods by giving them my own in free exchange. If others are free to do the same they will compete with me, and I cannot get people to take my work or my goods unless I give them what they want more effectually than my competitors. If I have no competitors I must be made to deal on as nearly as possible the same terms I would have to make if I had competition to meet. This, in broad outline, is the theory of private enterprise, and the structure that is built on it is, on the whole, very efficient and serviceable.

C. How it works out.—There are, however, many weak spots. The theory assumes that every transaction stands by itself. If any of them have an effect on third parties outside the bargain, that is something the theory does not allow for. And, in fact, all transactions have such effects, either good, or bad, or mixed. If they are good, we

have unpaid services, and if they are bad, we have unpaid damages. These latter, of course, are just the sort of thing the law tries to prevent or to reduce to a minimum. Most of the failings of individualism may be classed under one or the other of these two heads.

It is easy to see how unpaid damages reduce the efficiency of production, but unpaid services are also a weakness, though in a different way. If the services get performed, that is so much clear gain, but since they are unpaid, there is no assurance that they will be performed on the scale that would pay for the community as a whole, unless the community as a whole takes charge and pays for them as a community. Where things have to be done for the benefit of the whole community if they are done at all, anyone who voluntarily pays to get them done must be extremely public-spirited, for he knows that he will do all the paying and everyone else will benefit, and he is not likely to do it at all except unselfishly and temporarily, as a way of convincing the public that here is a service well worth what it costs which should be publicly rendered and publicly paid for. This is why we need a public-health service to stamp out contagion.

Again, much of the benefit of increased knowledge can never be made a source of profit by the person who made the discovery. If knowledge cannot be surrounded by a private-property fence of some sort, such as the patent system, the private inducement to produce it is weak; and if it is so fenced in, we are prevented from utilizing it to anything like its full capacity after it has been produced. Under the guidance of price, then, with its blind spots where services remain uncompensated, and its somewhat fickle way of rating human beings, the productive process goes on and productive sacrifices are incurred.

Is the process of production always worth what it costs to the community or to those who engage in it? What of the case of a family which is going to pieces because the father is disabled for work and the mother is undermining her health and neglecting the upbringing of her children, working in a vain effort to make both ends meet? The cost of her work is disastrously great. If she did not work, perhaps the disaster would be even greater, but what kind of surplus can be made out of this bookkeeping? The family has to choose between two alternatives, either one disastrous. Is society limited to these two alternatives in its dealing with the problem? Not at all. Its cost accounting has a different base line from that of the individual, for it can, if it chooses, save the family without forcing the mother out of the home and ruining her health. Here individual profit would permit a social loss.

Some costs are more obviously unpaid. In the last few decades especially we have been forced to a realizing sense that business safety depends not merely on one's own prudence and the soundness of his policy but on that of his neighbor as well. A collapse of business confidence affects all alike, regardless of who is responsible. A spirit of revolt among workmen starts disturbances which reach out and involve the most well-meaning and conciliatory of employers. If my customers are taken away from me by a catchy advertising trick, I have no legal grievance, but I have incurred a cost without my own consent and the gain has all gone to others. As a result of these and other more tangible forms of unpaid damages, many businesses are profitable which would not be profitable if they paid all their costs, and the process of competitive selection stamps as "efficient" in the business sense many forms of parasitism which mean national inefficiency.

Why do we tolerate the system which this impressionistic and one-sided sketch characterizes? Is it merely through inertia? If so, we are at present going through the greatest inertia-overcoming experience of modern times. Inertia is not by any means the only reason. The measure of the market has prevailed in spite of being an imperfect standard of social value and social cost largely because, imperfect as it is, we have had no definite substitute. Society has not known what it wanted and so has taken the market's word as the measure of the worth of different gratifications and of the efficiency of different ways of producing them. Moreover, people are justly afraid that if public control kills private enterprise the result will be stagnation; and it has not wanted a stereotyped economy, but rather one moving on to things whose nature no one could predict. Hence changes move slowly, until a crisis comes which compels us to throw caution to the winds under pressure of sheer necessity, and seek whatever immediate gains in national efficiency are within our reach, regardless of the ultimate consequences to our individualistic habits and institutions.

III. THE NATIONAL ECONOMY OF WAR

A. The new national objective.—The economy of modern war is radically different from the previous economy of peaceful individualism. Its whole objective is shifted; the nation has a dominant national purpose and knows what that purpose is. It is a necessity-economy, setting no national worth on mere personal enjoyment for enjoyment's sake. In time of peace things are worth what they are worth to individuals; in a state of war the individual himself is worth only

what he is worth to the state. In time of peace, enlarged consumption, even for the rich, is a contribution to the end for which society is working. It is a bit of social success. In time of war private consumption is, for the state, a mere means to an end, a necessary diversion of productive power from munition-making incident to keeping the people efficient and loyal. Any extra consumption is a subtraction from the end for which society is working—it is a bit of social failure.

The surplus economy characteristic of peace is one which must necessarily be guided by individuals, since no one else can tell what makes for the individual's subjective enjoyment. But the necessity-economy of war can be better guided by some authority capable of using the resources of science to determine needs objectively and organize production and consumption accordingly. So Mr. Hoover standardizes our diet, and others have made some slight beginnings at standardizing our clothes and limiting production of many "non-essentials." In Germany all foods are rationed out, only two suits of clothes are allowed, and the government seems to care less than nothing for the consumer's supposed bent toward organizing his purchases on a basis of maximum psychic income.

B. The attainment of the objective.—The efficiency that is sought is, first, efficiency on a national scale, and hence calls for an attack on the shortcomings of competition that have already been explained—the wastes, duplications, losses due to unpaid costs, and gaps where services are not privately compensated. In the second place, the critical need is maximum efficiency for a limited time—the greatest immediate gains. In the third place, what is needed is quick mobilization, a task which includes all industries and demands central authority. And in the fourth place the war itself furnishes an incentive to efficiency which has such compelling power over the responsible classes that, for the time being, we can afford to discount the fact that ordinary incentives to effort are weaker under public administration or control than under private enterprise. Let us see in more detail what this particular type of efficiency calls for.

IV. THE SOCIALIZATION OF KNOWLEDGE

As the war rolls over us, and wakes us to the need of doing the impossible, we suddenly become aware that we have resources of knowledge that are comparatively little utilized. The consumer for the most part orders his diet in sublime ignorance of true food

values, and wages an unequal contest with the swiftly changing arts of adulteration and imitation. Nowadays his guidance requires mobilized knowledge rather than unmobilized habit, and knowledge of a detailed scientific character about a multitude of things such as only specialized researches can supply. The consumer has not hired these things done for him, partly because he did not know how badly he needed them, and partly for the reason that knowledge is not appropriable like the ordinary commodity and its production is largely an unpaid service. The present wave of public education into the mysteries of proteins and calories, then, is but a phase of an inevitable development, due to science and scientific methods of production.

Producers as well as consumers suffer from imperfect utilization of the existing stock of knowledge of their trade. The "state of the arts," apart from patents and secret processes, is properly a national asset, but there is no comprehensive machinery for organizing it on a national scale. The standardization of methods, combining the best that is found anywhere, can not only raise the average efficiency of industry; it can even show the most efficient how to improve still farther by strengthening his weak points. The present channels for interchange of knowledge are more efficient between producers than between consumers, and complete pooling might injure the incentive to private inventiveness in the future. One of the most promising fields for standardization is that of labor policies, for here the rivalries between employers do not come into the foreground as they do in the case of mechanical devices or chemical formulae and they feel that there is little to lose by the pooling of labor policies. Moreover, the gain an employer can make from successful treatment of labor has not, apparently, been an effective enough incentive to get the labor problem solved for the nations. What is needed here is a discriminating policy. For the immediate emergency any amount of pooling that can be secured in any field will be clear gain, and will have no bad effects on future progress. After the war, if the socializing of trade knowledge is to be continued in any industries, there will be need of a more formal system, fortified with more substantial inducements. Meanwhile the experience of the war, if properly utilized, will be furnishing valuable testimony as to where the greatest gains are to be had.

As these words were being written the morning paper arrived, with the announcement of a new American aeroplane engine, as good as the best foreign engines, and combining many of their best features,

but capable of being turned out in large numbers by American standardized machine-process methods, rather than with much hand labor of many artisan-technicians, as abroad. This achievement[1] seems to have been made possible chiefly by the pooling of engineering talent and of different designs and trade secrets, under an incentive strong enough to spur men to work twenty-four hours a day. There is a prospect of continued progress, also, but chiefly under the spur of the most active of all forms of competition; namely, the competition at the fighting front.

Such things prove that there are unused possibilities for immediate advancement in private industries where patents or secret processes are held, or where local producers are out of touch with each other's achievements. They give one a sense of the sudden liberation of pent-up forces that reacts into sheer exasperation at the obstacles of ignorance and inertia which hamper us, and the walls of secrecy and proprietary prohibition which we erect at such pains and guard so sedulously. But they do not prove that all competitive incentives can be discarded and all competitive barriers broken down if we wish to keep on progressing.

There are certain fields where the progress that is due to the spur of private incentive is hardly notable enough and rapid enough to be worth keeping, if keeping it involves sacrificing any experiment which has a prospect of showing really substantial results. These backward fields are chiefly those in which business is in the hands of many small producers, or carried on in small places with the aid of more handicraft skill than of mechanical devices and engineering or scientific methods. Very small producers cannot afford to experiment extensively, nor to study the methods of other producers in the attempt to standardize their own, and it would be a ruinously wasteful duplication of work if they were to do so as individuals. Extremely small producers cannot even be expected to be in a position to organize themselves effectively into associations to do this sort of thing for them, although that is one way in which the dilemma may in many cases be solved. Another solution, far less desirable, is the extinction of small producers by larger ones who can afford the study and investigation required to standardize efficiency and attain it.

This would amount to sacrificing the small producers, not because they cannot be as useful, or perhaps more useful, than large ones in

[1] Later developments, however, show the "achievement" not yet accomplished.

the actual work of production, but because they cannot organize and standardize their work as well as carry it on. But if the standardizing can be done for them by some large agency, they may prove, on account of their more direct contact with the details of the business and on account of the more intimate relation between owner, workman, and consumer, to be better adapted to handling the industrial problems which hinge on these unstandardized and very human relations. For example, if systems of accounting, stock keeping, organization of space, and delivery can be standardized for the various kinds of retailers by studies made on a large scale, and market information secured by some large-scale agency, the small retailer will have presented to him the means of equaling the advantages which the chain store now has over him in these matters, and he need not spend his time and energy on the kind of problem at which he is necessarily working at a very heavy disadvantage, but can spend it all on the sort of problem which no standardized system can solve for him, studying his customers' tastes, and adapting his policy to the peculiarities of his local market.

If local producers are so far out of touch with each other that they make no attempt to imitate each other's strong points, but each continues in his own groove, satisfied with the methods he has developed himself and with his achievements in those parts of the process in which he himself may be superior, this fact itself is evidence that the competitive stimulus is not strong enough to do the work we rely on it to do. Producers who are in no sharper competition than this are not receiving the kind of competitive stimulus that is likely to lead to rapid industrial progress. In such a case one need not be afraid of the weakening of competitive stimulus which would come from pooling the knowledge of the trade, for there is so little stimulus to lose. There would be no grave danger even in going to the length of standardizing the process and trusting to co-operative enterprise, or the "instinct of workmanship," or even to governmental experimentation, for the means of future progress.

Beside those cases in which the private incentive system is notably weak, there are cases in which a co-operative or public agency is equipped to do the work notably well. Where the chief thing needed is accuracy, and the most important industrial quality is disinterestedness, there is little need of the stimuli of ordinary industrial competition, and they may, indeed, be fatal to the peculiar reliability of result that is wanted. In the case of employment agencies, for example, we

are rapidly finding out that the disinterestedness of a public agency is a far more essential quality than any of the good points which private enterprise may have in this field. This is in essence simply another form of the socialization of economic knowledge. The diffusing of information about prices is an important service which may in some cases be well rendered by private enterprises, but is by no means certain to be rendered at all unless some public agency takes the responsibility.

One clear case of this is the work of testing whether things conform to standards where standards have already been established. In other words, it is the sort of work which the present Federal Bureau of Standards is doing, with an ever-widening scope. The work of establishing standards themselves, based on the best existing practice, or on the combination of the best single elements to be found in existing practice, into a new standard better than anything actually found; such work as this, in well-selected fields, is clearly a proper function of government in the present state of industrial and scientific development. But how about the work of breaking new ground and making new discoveries? Is not government proverbially cautious and unenterprising in its conduct of productive enterprises?

Yes, public enterprise is cautious, and has often proved unenterprising, but nevertheless the conclusion which seems so obvious does not necessarily follow, namely, that it is useless to look to government for any industrial innovation. When a government official is given a task it is not the part of caution to do nothing at all. But it is the part of caution to see to it that the task is accomplished with as few risks as possible of doing anything which may prove to be an expensive mistake. If the task is the running of an industry or the rendering of a definite material service, the public manager will stick to established methods if they work tolerably well, and what experimenting he does will involve the risking of the tolerable result already obtained, or at least will involve an expense which will be a burden on his financial showing, and so to that extent a risking of his present tolerable result. And experiments are extremely likely to go wrong.

But suppose the business with which this public official is charged is that solely of experimenting? He has no other service whose results may be endangered by the failure of any given experiment to materialize. What will he do? He will do his job, and try to show results—a thing he can do only by continued achievement. If he is

working in competition with private laboratories, he is under the genuine competitive stimulus, with all that this implies.

V. THE SOCIAL MINIMUM

In one way or another the principle by which purchasing power carries with it power over all the earth's resources, even to the shutting out of some from the material means of opportunities to become efficient is limited or supplemented by another principle. Some things are so important that society cannot afford to leave them at the mercy of this rule of distribution, but must see to it that they are distributed under a system in which every one counts as one. The minimum that is thus furnished is, in its most important aspect, a minimum of opportunity—opportunity to maintain health, to acquire knowledge, to know beauty, and to mobilize one's abilities to the best advantage.

There are two ways in which the proportion of society's whole resources that goes to the furnishing of this minimum, may become greater, and the field of individualistic distribution be correspondingly diminished. One is by some great disaster. It is only when things go on in such a way that the unaided individual has at least a fair chance to be able to take care of himself that the free-exchange system can become dominant at all. A fire, an earthquake, or any such catastrophe seems automatically to put the other rule in force, and we fall without question into the system of distributing food and blankets to rich and poor alike and making every refugee wait his or her turn for railroad accommodation, regardless of what fabulous prices some may be willing to offer for tickets.

But there is another way in which the scope of this principle is enlarged—by a force that operates more quietly, more constantly, and all-pervasively. In a word, the more we find out about life and how to make things useful, the more things do we find to be necessary to really efficient living and working. Material conditions which used to be regarded as matters of taste are found to be possible sources of disease, physical or mental. In a sense, since everything in the environment has its effect on man's development, perfect equality of opportunity can never be had short of absolute equality in all possessions and all services received. But be that as it may, what we have at present is a compromise system, so that the power of the rich to buy more than others is by no means as great as if the whole of a man's gratification were left for him to buy for himself in the market.

Economic inequality is being attacked in two ways, which we may call extensive and intensive. Its extent is attacked by progressive taxation, while the range within which superior purchasing power gives superior power to satisfy wants is limited by the policy of the social minimum. From what has been said it may be inferred that the principle underlying the rationing of a population through bread tickets or similar devices is no new thing, and that as long as the world feels the pinch of shortage in foodstuffs it will continue some form of public control so that waste may be prevented and no class consume so much as to involve the serious undernourishment of others. The methods of securing the social minimum are various. Those who cannot afford it may have it supplied to them direct by some public agency, and the rich may be left free to spend their incomes as they will, subject only to the competition of the government itself in buying the things which it distributes. Or, without going as far as this, the price may be put artificially low and the inevitable excess-demand be kept within bounds by limiting the amount which any one person is allowed to buy. This is the familiar "bread-ticket" policy, and it involves an amount of supervision which has not hitherto been found possible in ordinary times, while even in time of war the growers of foodstuffs themselves are to a considerable extent immune. Another method which has the effect of limiting the power of money in private hands to turn the productive resources of the nation away from the production of necessities into the making of luxuries is the method of controlling production directly and of giving priority to those demands which represent the most urgent social necessities.

It is impossible now to predict how much will survive of the war policy directed to this end. The more extreme forms of interference with personal liberty certainly will not at once become permanent parts of our life. On the other hand, those forms of direct public service which help to secure the social minimum without obvious interference with personal liberty will, beyond a doubt, be much stimulated. Of control through the producers themselves, there may well remain some system by which trade associations are recognized as performing a number of quasi-public functions in voluntary co-operation with government bureaus in policies looking not merely to the elimination of waste in production itself but toward the checking of trade practices which make for waste on the part of the consumer, and the stimulating of trade practices which tend to urge the consumer in the direction of economy.

VI. PRIVATE SALESMANSHIP VERSUS SOCIAL GUIDANCE

The consumer certainly needs the service which at present he gets through the channels of advertising, namely, the guidance of purchase under a system in which purchase is the guide of all economic effort. He needs to have goods and services brought to his attention in an enlightening way and to be informed of their good and bad points so that he may spend his money wisely. But when one stops to think of the various things the government is now doing, one cannot fail to realize that it is rapidly furnishing a set of agencies for economic guidance—that is, for doing just the thing that advertising does—on a wholly different basis and much more economically. Its campaign for the enlistment of housewives in an intelligent use of food, its testing bureaus, its systems of priority, of price fixing, and ultimately, perhaps, of general control of consumption, are virtually paralleling the social service of salesmanship in this field with a service which is not exactly its equivalent, but is rather an improvement, better adapted to war-time conditions. Thus the value of private salesmanship is narrowed.

Perhaps advertising will shrink automatically as businesses feel the pinch of diminished demand and increased cost and find their market, under the stress of war conditions, suddenly becoming unresponsive to the ordinary tactics of salesmanship. Or perhaps some less far-sighted producers may, for a time, spend more than usual on advertising in order to strengthen the dwindling demand, utilize the unused capacity of their plants, and come as near as possible to preserving "business as usual." Ought we, in a society forced to sharp economy, to maintain private advertising and salesmanship on the ordinary peace-time scale to which America is accustomed, while the government is itself guiding industry directly and at great expense? Such a duplication would seem to be little short of criminal wastefulness.

This state of things will not be permanent, but it should have some effects of permanent value. The government can exercise economic guidance at present because it does not have to ask first "does the consumer want this service rendered?" but can confine itself chiefly to the question "will this commodity render the required service better than any other?" When more normal times return we can afford again to pay more attention to the question what kind of services the consumer wants, and unstandardized methods of advertising may again become appropriate. But meanwhile, there will have been a

wholesome object-lesson in the value of disinterested information such as comes through public or co-operative channels, and if it shall happen that the work of advertising and salesmanship of the private sort is cut down during the war to a fraction of its present amount, we shall have had another wholesome object-lesson in the discovery that nothing of any substantial value to consumers or to producers in general has been lost. The result may well be a determination, possibly exercised through the channels of trade associations in co-operation with the government, or possibly in other ways, to practice in the future a mutual limitation of armament in advertising warfare which will lessen the waste without sacrificing any valuable services that are now being rendered.

VII. CONTROL OF THE REWARDS OF INDUSTRY

Free contract as a method of mobilizing industry is best adapted to certain conditions which are, for the most part, fairly well realized in times of peace. To discover in what direction the social will is going to move industrial effort we wait for the social will to express itself through demand in the market. The changes that are continually going on are not so large as to be revolutionary, at least for large industries. Under such conditions, the individual has, in the first place, a fair chance to take care of himself in spite of the shifting environment, so that those who come to grief are a minority, though even so they are a serious and growing sickness in our industrial body. In the second place, since the changes are comparatively gradual, they do not revolutionize rates of wages or the rates of return to industrial capital. Indeed, the traditional economic theory goes on the assumption that an inducement, however small, will attract labor and capital from any part of the market to any other part.

In time of war the movements called for are so huge in quantity and the demand for speed so urgent that if it were left to the incentives of increased prices and increased wages to bring about these changes, it could only be done by a huge increase in the returns to labor and capital, with the result that, as we have already seen, the increased purchasing power in the hands of those who are in the growing industries is used virtually to bid against society.

The bottom fact is that we are faced with the task of working out a collective system of efficiency rewards instead of a competitive system, and to make an intelligent beginning we must get rid of all preconceptions as to whether the two do or do not necessarily corre-

spond. The competitive system has a strong tendency to make differences in pay equal to differences in the exchange value of the product. On the other hand, while the collective system requires that superior work shall earn superior pay, there is no exact equality needed between the differences in output and in pay, and the price measure is not to be accepted as an adequate test of superiority in output, for reasons some of which have already been dealt with.

The lowest wage paid is higher under the collective than under the competitive principle, for the loss of efficiency due to low wages does not fall in its full extent on the employer who is responsible; it is largely diffused by the shifting movements of the laboring population from employer to employer and from industry to industry.

The piece-wage of competitive efficiency is a progressive rate, since the faster workman reduced the overhead cost per unit of product. At flat piece rates, slow workers are relatively unprofitable. The collective system, on the other hand, may call for a degressive piece rate in order to prevent the laborer from overworking in the effort to earn the exaggerated premium that is offered. The present system is a combination of both principles, the pure competitive forces being modified, partly by regulation and partly by the increasing realization on the part of employers of the wastefulness of a large "turnover" of labor, which results in their giving their employees inducements to stay with them and to establish a relationship of stable status with mutual responsibilities in place of the momentary tie of an irresponsible contract under constant competitive pressure. This shift from contract to status is in the line of progress for the future, as far ahead as the future is worth while trying to predict and to plan. The war will thus stimulate a movement which is destined to be a continuing feature of our economic life.

The difference between the collective and the competitive supply-price of efficient labor is, however, only one phase of a broader one involving all the factors of industry. Society is getting a chance to test its power as a monopoly buyer of all these factors, for *if it is willing to exercise the necessary force* it can free itself from the need of paying capitalists and owners of natural resources the exchange value which these factors would have in competitive industry.

The principle of priority for necessities, applied by boards who have power enough to decide the destination of all the elementary raw materials, will soon reduce our supply of luxuries, while at the same time the control of prices may prevent the producers from absorbing

as much of their customers' income as before out of a lessened volume of business. If pleasure automobiles and similar luxuries are not to be had, more money will be saved at the same rate of reward. Thus society might be able to get a given supply of capital cheaper than the "normal" supply-price for that amount. In a word, we have the opportunity of testing to what extent the powers of society as a monopoly buyer exceed the powers of its members as competitive buyers, and to what extent supplies may be forthcoming on better terms to society than to its separate members.

More fundamental still, we are getting used to the idea of two social accountings, one of the service-value of commodities and services, for the purpose of directing materials and labor to the most important uses, and the other of the rewards necessary to go along with this organization of industry and to stimulate efficient service. Formerly there was but one accounting, for the selling price which was the measure of productive worth also constituted the reward to be divided among the factors of production. This is natural in a state where the chief purpose of industry is one and the same thing as the rewards ("real incomes") of individuals. And in order to establish the double system of social bookkeeping we had to be faced with an emergency in which the dominant national need is something altogether different from the enjoyments of individuals, and a great part of our energy must go in ways that contribute nothing directly to individuals' private supply of consumable goods. Priority orders, the draft and exemptions, shipments of food abroad, all are valuations in terms of the national need and independent of money. Ultimately we hope to go back to the happy state in which consumable goods are the chief thing industry is run for, and price is accepted (with fewer qualifications than now) as the measure of their real worth; but in the meantime we may have learned that the system of wages under which the combined enabling and stimulating effect will yield the greatest possible product is not the same as the system of wages that supply and demand would give to different grades of workers, nor is it necessarily a system of rewards in exact proportion to the product currently turned out. But to organize industry efficiently, an accounting based on actual contribution to the product is necessary, or else we shall be putting things to inferior uses and wasting their best possibilities.

Thus the war between socialism and the "productivity theory" may take a new turn, for a socialistic state must use an accounting system involving calculations of "marginal productivity" in order to organize production efficiently; indeed any organization of production has such judgments implicit in it, though they may be unconscious and inconsistent with each other. But such a society need not make "marginal productivity" also the rule for distribution of rewards.

VIII. CONCLUSION

How much of the near-socialism of this war is temporary and how much, if any, will be permanent? Some of the needs that have given rise to collectivist policies have been created by the war, but others have been merely revealed. Some features of our present policy are due to the fact that the emergency is temporary, but others rest on the permanent requirements of national efficiency. Far from sacrificing future progress by our experiments in collectivism, we are rapidly putting ourselves in the way of acquiring, from a few years of war, more genuine experimental knowledge of the conditions of economic efficiency in the large than we could probably have gained in as many decades of individualism, business competition, and the ventures in social-economic experimentation that can be argued through legislative assemblies in time of peace.

Indeed, for many of these experiments the present war is merely the occasion, and the true determining cause is nothing less than the socializing effect of the growth of science and of scientific standards of consumption and methods of production. The nation has decided that there is an efficiency which, for the service of the nation, is greater than the efficiency of unregulated competition, and it will not be contented with the old standards. It has formed the habit of deciding what it wants, as a nation, and demanding it, and the effect of this will not quickly evaporate. The minimum of necessities will remain a national need, no matter how great the surplus of the more prosperous classes.

In agriculture alone it will take years of peaceful education and demonstration by non-competitive organizations to give us half the benefit of our unused resources of knowledge. Researches in the long-run effects of hours of labor on output, and in stimulative systems of apportioning rewards, should have a great range of usefulness. The consumer can still benefit from disinterested scientific information

in place of advertising catchwords or the habits of his grandfathers. The industrial mobilizations of peace will continue to produce, if left to themselves, the same sort of wreckage (chiefly the degenerate "casual laborer") which they have produced in the past, and which the nation is taking measures to prevent in the case of army service and war work. The status of labor in industry remains a problem transcending the scope of any business unit, and failure to solve it may yet shatter the industrial order. All in all, the need of a more coherent social organization is probably not less great in times of nominal peace; it is merely less obvious and less immediate, and it tends to be met by methods which, because they are more leisurely, involve less centralization and less compulsion.

As to the future form of industry, there is little one can predict with certainty. The working connection between government and business must come, not by handing over business to be run by the old political form of government, and surely not by putting business interests as now constituted in control over the government. The most promising possibilities lie in taking business into government, but in a far different way; and one that should make every business man in his regular business in some degree a conscious agent of public service, not merely in vague recognition of a vague obligation to the public, but in definite and important duties, balanced by definite and important benefits received. Perhaps it is not worth while at present to speculate much upon the precise form of organization in which the ideal may be embodied, and the election of a business entrepreneur by those who deal with him may be recognized for what it is—an election to an important public office by a method which sifts out inefficiency far more certainly than do the political primary and the ballot. Surely no solution can be worthy of the name which is so weak as to be afraid to render assistance to business where public or collective action is needed to make business truly efficient. Nevertheless there is one thing that must be guarded against as one guards against the plague. The alliance of business and government must not take such shape that it can continue to lead to wars, as it has in the past. If efficiency in foreign trade demands governmental aid, that aid should be internationalized, or we need expect—and will deserve—no ending of international armed conflicts.[1]

Or perhaps, since democracy means inefficiency as compared to autocracy, inefficiency is what we are fighting to make the world safe

[1] Cf. chapter xv.

for. There is much to be commended in the ideal of economic inefficiency, if by that is meant fewer commodities and a more leisurely and normal life. That would be a higher grade of efficiency, in terms of living. But it would be fatal to the nation's military strength, and there is little chance that the outcome of the war will free us from the cruder demands of technical efficiency. And in any case it is of the utmost importance for us to hold fast all the lessons the war can teach us as to the means of permanently increasing the success of communities in getting what they, as communities, genuinely desire.

XV

ECONOMIC FACTORS IN AN ENDURING PEACE

Introduction

With this chapter we return to a consideration of the perennial problem of international economic friction. If at the end of this war we are to lay the foundations for a new world-order, it is not enough that we merely should convince Germany during the war that war does not pay (cf. chap. ii) in a positive sense; it is not enough that we establish international tribunals and an international police force, important as these may be. Nor will it suffice to attempt an economic boycott of the enemy. We must at least make an attempt to organize the world at the end of the war in a way that will break the vicious cycle of influences (see p. 3) that leads to economic rivalries and international friction.

The readings in the present chapter contain no answer to this greatest of world-conundrums. They are designed merely to raise the problem in its more important aspects and to indicate that already the interests and influences that have led to past wars are laying the groundwork for future rivalries and antagonisms (Sections LXVI and LXVII). The more immediate issue is that involved in the control of raw materials during the period of reorganization at the end of the war. There are at present diverse views as to the organization and disposition of the limited quantities of basic supplies that will exist at the conclusion of peace. On the one hand, it is urged that the Allies should cement their control of international trade and force Germany into a position of secondary importance in the world of the future. Now if the war ends in an inconclusive peace—the sort of peace which would be only an armistice—this would undoubtedly be sound inter-allied strategy. But if the war terminates in such a way as to give hope for a world in which the nations shall live in amity, trust, and understanding, all nations must join in a common economic alliance—a co-operative alliance for purposes of mutual material and cultural advancement. The situation calls for an entirely new type of international statecraft—one that will envisage the economic interdependency of nations and peoples no less than the rights and aspirations of a common humanity.

LXVI. The Raw-Materials Question

1. GERMANY'S NEED OF RAW MATERIALS[1]

After the war is over the German Empire will resemble a great store which has sold out its stocks. In the first three years of war, goods, most of them raw material, to the value of $4,000,000,000 were prevented from entering Germany. There is an absolute shortage of everything "from cotton to sulphur, from seal bacon to platinum." That shortage is a serious danger, for it stands to reason that just as a man out of breath cannot run, a pumped-out state cannot engage in a new war. She must first of all get her breath.

Does anyone imagine that the peace will bring with it sudden quiet? Our statesmen cannot tell. Hitherto they have not been very reliable augurs. This war has surprised them, notwithstanding a hundred warnings. Our statesmen had dreamed of work brotherhoods, and then war came. One lesson we have to learn—to be on our guard. We must cast away our amazing sentimentality—this dangerous inheritance of the Teutonic race. We must see things as they really are.

Peace will not bring us supplies. Even should peace open every market in the world, it would not prevent the wildest competition for raw material and food supplies. Every cotton spinner will struggle to obtain a quick supply of cotton, every gardener will strive for seeds, every farmer for oil cakes. English and German, French and Austrian, all will madly struggle for supplies. And those who in war were allies will be economic enemies on the markets.

The spinner must have cotton if the home-coming textile workers are to have employment and if he is to pay his burden of taxation. What will happen when these millions return from the front and cannot be employed because of the lack of raw material? We must not rely on the possibility of obtaining supplies simply by paying for them. Money will not bring in the goods, and will foreign countries accept our paper? Besides, tonnage will have sunk to the very lowest. Against these inevitable economic catastrophes, which in certain circumstances can be almost as destructive as war itself, there is only one possible course—prevention.

The victors in the great war, that is to say the Central Powers, must insert this condition in the peace instrument: "We demand a

[1] By Prince du Loewenstein Wertheim Frenderburg. This article appeared in *Die Wirklichkeit* and was reprinted in the *American Metal Market and Daily Iron and Steel Report*, April 4, 1918.

portion of the war indemnity in raw material, and this immediately and before other powers have been supplied." The victors must be the first to eat. We thus get our goods through the state. These goods are given over to our industrials, to our farmers, traders, etc. In this way the state would fructify all necessary channels in a way hitherto unimagined, and besides, in this way we gain a good start over all competitors among foreign nations.

In this way Germany could re-establish its national economics and avoid the catastrophe of unemployment, exorcise the spectre of want, and banish all danger. The manufacturer gets his material, the farmer his fodder, the trader his goods, the workman his earnings, the people their food, and the state its indemnity.

England must supply tin and wool, and as for colonies like Canada, they must yield us copper, nickel, cobalt, and leather. Australia must produce spelter, wool, grain, and frozen meat, and other colonies jute, leather, fats and oils, rubber, rice, tea, cocoa, etc. South Africa will supply us with gold, and Egypt, should it still remain under British rule, with cotton. France will give olive oil, other oils, and wine, and Algeria will give us cork and phosphates. Italy will supply vegetables, sulphur, raw silk, hemp, and oil, and from Russia will come wheat, barley, flax, oil cake, leather, eggs, platinum, and bismuth.

This process of indemnification must be continuous until the entire indemnity, as far as possible, has been paid. It is only in this way and by such means that the war and its consequences can be changed for us into a source of blessing which will again raise our land and people to their old height, which will save them from the abyss of want, from crushing taxation, from mass emigration. Destiny compels us to take these steps, and we must take them or perish. It would be a crime were we to allow false magnanimity or a palsied will to prevent us utilizing our victory to the full. If we neglect this opportunity all eternity will never give us such another chance.

2. THE PARIS ECONOMIC CONFERENCE[1]

The representatives of the allied governments assembled in Paris for the purpose of carrying out the charge entrusted to them at the Conference of Paris, of March 28 last, and of turning to account their unity of views and interests. At the close of the proceedings it was decided that the members of the congress should submit for the

[1] Adapted from *Facts about the War: A Bulletin of Information*, published by the Paris Chamber of Commerce. Paris, July, 1916, No. 39.

approval of their respective governments the following resolutions: First, measures to be taken for the duration of the war; chiefly consisting in the unification of the laws bearing upon economic relations with the enemy. Second, temporary measures for the time of recuperation after the war; for the commercial, industrial, agricultural, and maritime reconstitution of the allied countries. Third, permanent measures for mutual assistance and collaboration among the Allies.

When the text of these decisions was handed to the press, M. Clemental, the Minister of Commerce, made certain declarations with a view of specifying the importance and compass of the resolutions. The principal passages were as follows:

Dumping is the favorite weapon of the Germans for acquiring commercial supremacy. It consists on the whole of measures affording bonuses for exportation, direct or otherwise; for selling inland at a higher rate than abroad, etc. . . . . with a view to ruining competitive foreign industries.

The Conference of Paris has provided for thwarting this policy—if the war took us by surprise, we do not intend that peace shall do so too. The Allies are the strongest from an economic point of view. They represent a population of nearly four hundred millions, and dispose of the greater part of all raw materials—nickel and platina ores and aluminum (bauxite) are entirely in the Allies' hands; and 84 per cent of the manganese. As regards hemp, the Allies' production is four and a half times larger than the enemy's; as to flax, the Allies hold four-fifths of the world's production; with regard to wool, their supply is eleven times larger than that of the adversaries; in silk, eight times greater; they have the monopoly of jute, and if the neutrals share to a great extent in the production of cotton with the Allies, their adversaries are short of this commodity.

The economic superiority of the Allies is obvious. To insure it there never was any question at the conference of adopting a customs policy for all: each ally will remain wholly independent. Each product will be the subject of separate negotiations between the countries interested in the matter, and an infinite variety of combinations may be made.

Another principle of the allied governments in the war of legitimate economic defence that they are undertaking to wage is not to attack anyone. The neutral nations have nothing to fear—we are working to free them. The destruction of German economic overlordship means the suppression of a danger that threatens them.

By increasing the productive forces of the allied countries, we render them better able than in the past to check the attempts at oppression which one nation might in the future again be guilty of, and by so doing we are working for the assurance of peace.

Everyone knows how Article II of the Treaty of Frankfort has become a powerful economic weapon in the hands of the Germans, thanks to its specialization permitting them to disregard it when its observance would have proved a drawback. The same clause will not occur again. The Allies are fully agreed upon this point, even Russia and Italy, with whom the Germans had fondly hoped to maintain their privileged situation; and this shows to what extent nations desire to be freed from the economic domination that was weighing upon them.

The free disposal of raw materials is an essential factor in the economic power of a nation. Germany had in her possession foreign ores, and these she converted upon her own territory. This was the case with Australian zinc, aluminum from Provence, asbestos from Russia or Scotland. The Allies are now determined not to leave these articles, so essential to the prosperity of a nation, to others. Mr. Hughes, the Prime Minister of Australia, told me that not a grain of zinc ore should leave his country for Germany even if in the future the latter should order double the quantity she purchased there in the past.

The Allies have considered the measures to be adopted in order to save their industries and manufactures from suffering through the business methods practised by the Germanic Empires—especially dumping. They have undertaken, for a certain length of time which is to be fixed among themselves, to subject to certain prohibitions or special regulations all goods originating in enemy countries, thus enabling them to cope in an efficacious manner with any attempts at dumping. The fact that at the present time Germany is concentrating upon her own territory large supplies of goods, mostly manufactured with raw materials from the invaded regions, makes this agreement all the more necessary. It would be preposterous for the Germanic Empires, immediately after the war, to be able to raise their rate of exchange by selling to the Allies goods manufactured from raw materials which were their (the Allies') own special property.

3. THE ORGANIZATION OF RAW MATERIALS[1]

It is becoming increasingly clear that, whatever may happen in the near future on the battle-fronts, the Allies possess in their immense concentration and control of economic resources a weapon which must ultimately, if they hold together, decide the war in their favour. Indeed, they could win the war by this means even if (*absit omen!*) they did not all hold together—for the Western Powers alone would be sufficient to drive the weapon home.

The Paris resolutions have been frequently represented in the allied countries, especially in America, as embodying a policy of reaction dictated by protectionist interests. Most of those who hold this familiar view have never read the resolutions or the preamble by which they are conditioned, and are imperfectly informed as to the far-reaching German policy to which they were a belated reply. In reality, of course, the Paris resolutions, framed as they were in June, 1916, during the critical days of the Verdun attack, served a double purpose. They were partly defensive and looked forward to the possibility of a "war after the war" against a Germany in secure possession of "Mitteleuropa." They are certainly open to criticism on that score as a policy of despair, but not as a policy of reaction, for against such a power the economic boycott would have been the only remaining refuge of civilization. But in so far as they envisaged action by the Entente and neutral powers among themselves, the preamble, with its insistence on an international standard of commercial fair dealing, will remain memorable for the way in which it boldly set what has hitherto been regarded as the selfish concern of separate governments upon an international footing; and the same applies to the resolution as to the co-operative organization necessary for the apportionment of supplies at the end of the war. All that is needed in this connection is that the Allies shall bring their policy up to date by adapting it to the present economic position, which is very different from that which prevailed, or was believed to prevail, in June, 1916. At that time it was still possible to think of the post-war economic situation in terms of *markets;* to-day it is obvious that the dominating factor is *supplies*. No manufacturing country will be able to resume its export trade on the old basis or even to demobilize

[1] By "Atticus." Adapted from "The Economic Weapon," *The New Europe*, IV (July–October, 1917), 353–59. Published by Constable & Company, Ltd.

its armies till it has secured the raw materials which are essential to industrial production.

The world-shortage of supplies, and of shipping to convey them from producing to consuming and manufacturing countries, will therefore be, if not the most important, certainly the most urgent, problem which will confront the world on the close of hostilities. It will be the first international task of the new world-order, and on the way in which it is carried out will depend the spirit and atmosphere that will prevail during all the other difficult labours—the fixing of frontiers, the safeguarding of minorities, the rehabilitation of public right—on which the Powers will be closely engaged for many months after the first urgent questions have been disposed of.

The time would seem to be ripe, then, for a new economic conference to revise and bring up to date the findings of the conference of June, 1916. It should not be a conference of all the Powers, great and small, which have either declared war on Germany or broken off relations with her. It should be summoned for the purpose of considering the post-war economic situation, and of discussing how best the resources of the various states could be organized in the interest of their own peoples and of the civilized world. Such a conference, when it met, would find itself compelled, like its predecessor, to abandon the self-regarding competitive outlook and to fall back on co-operative methods. It would inevitably be driven to consider how the existing inter-ally system of economic control could best be adapted to post-war purposes and to the needs of neutrals. The result would probably be the organization of something which could be described as a relief commission, with comprehensive powers in respect to shipping and supplies to tide over the period when the pressure of the shortage will be most severe. There is good ground for believing that such a plan is both practicable, in the light of recent experience, and acceptable to the Powers chiefly concerned.

If such a plan were adopted, it should be made clear to the Central Powers that when they have accepted the allied terms, including, of course, full reparation by the guilty parties for the ravages of war and acts done in violation of international law, there is no desire to penalize them further or to hinder their recuperation. Their peoples should be offered, under these conditions, a proportionate share in the controlled supplies and insured against any legal restriction upon their legitimate trading activities at the expiration of the period of trade control.

No pledge or action by governments, of course, can give back to the German trading community the confidence of individual dealers or purchasers in the countries they have antagonized.

4. AN ECONOMIC ASSOCIATION OF NATIONS[1]

I have been much interested in the series of addresses and discussions at the recent meetings of commercial associations in the United States, such as the chambers of commerce and the Foreign Trade council, regarding trade after the war. The tone of these discussions seems to show clearly a desire for settled arrangements for mutual help between all the nations now associated in the war against Germany. These are also our feelings in Britain, and I should like to make some acknowledgment of these recent utterances of prominent American commercial men by trying to describe roughly the state of British policy at this moment in regard to such matters.

The resolutions of the Paris economic conference have been much discussed during the last two years. When they were written we had an alliance of eight nations, six of whom had suffered the immediate ravages of war. The world outside, including the United States with its vast resources, was neutral, and nominally, at any rate, the neutral world at the conclusion of peace would have sold its products where they would have fetched most money.

To borrow the plain words of the recent interallied labor conference, all these vast resources would have gone to those who could pay most, not to those who would need most, so the Paris conference was a defensive agreement of those then engaged in the war to secure their own people against starvation and unemployment during the period of reconstruction, and to provide for the restoration to economic life of the ravaged territories of Belgium, Poland, Serbia, France, and Italy.

These objects retain all their old importance. They are simple measures of self-preservation. It is, for example, still essential that we should forestall the aggressive efforts of the Central Powers to use their money power to snatch on the morning after the war the raw materials needed for the reconstruction of the peoples in the western and eastern theaters of war whom they have themselves despoiled.

[1] By Lord Roberts. In daily press, July 15, 1918.

Ed. Note.—This statement outlines the purposes of an association of twenty-four nations in employing the economic weapon along with the military weapon against Germany.

But, while the essential needs of ourselves and of the nations which are fighting with us the battle of liberty and justice remain unaltered, the Alliance of Eight has expanded into the Association of Twenty-four Nations, of which President Wilson spoke in his recent address to the Red Cross. It is no longer a question of forming some narrow defensive alliance, but of laying down the economic principles of the Association of Nations which is already in existence, and to membership in which we are committed.

What are these principles to be? The President has stated them in memorable words.

Each member of the Association of Nations may have to protect its citizens in one way or another after the war, but our aim must be a comprehensive arrangement of liberal intercourse with all members of the association by which each one of us, while preserving his own natural security, may contribute to meet the needs and aid in the development of his fellow members. Nor, of course, can our arrangement for mutual assistance exclude all competition, though we are most anxious that co-operation should be the keynote of our commercial relations. Our feelings in this matter cannot be better described than in the words of James A. Farrell to the Foreign Trade council, namely:

"The sacrifices that are being cheerfully endured today by men engaged in foreign commerce in the necessary curtailment of their business through the conservation of shipping are an earnest of the elevation of method and of purpose which will control the conduct of our external trade in the future."

There is but one obstacle to this economic association of nations. That obstacle is Germany—the Germany described by President Wilson in the words which I have already quoted—a Germany living "under ambitious and intriguing masters." You have seen the provisions of her commercial treaties in the east, and with all the groups of peoples from the Arctic ocean to the Black Sea. Her economic policy toward these groups is absolutely contrary to our principles. That policy began by systematic and lawless plundering in Poland, in the Ukraine, and elsewhere. Now everywhere she has legalized this plunder by placing the weaker nations under onerous commercial tribute to herself.

On Lithuania she has imposed her coinage. From Roumania and the Ukraine she has exacted a guarantee of supplies irrespective of their own needs, and at flagrantly unjust rates of compensation.

She has appropriated the natural resources of Roumania in the form of a lease to German corporations. On Russia, Finland, and the Ukraine she has imposed unfair and one-sided tariff arrangements. The people of Finland, in fact, now find that their liberties have been bartered away in an agreement signed secretly in Berlin, and it is actually being proposed that thousands of Finns should be deported to work for German masters.

Having established control over the Dardanelles and the Baltic, Germany has now brought under her own control the third great highway of European trade—the Danube—by destroying the international commission which had long become an established organ of European polity, and now, in order that there may not be any mistake as to the significance of these acts, her foreign minister has declared that this Roumanian treaty in particular will be made the precedent and foundation for the economic terms to be demanded by the Central Powers at the general peace. The significance of this declaration is evident from Kuehlmann's own words, that "the damages Roumania will have to pay will amount to a very considerable sum in the long run, a sum which perhaps does not very substantially differ from that which might presumably have been obtained by officially demanding a war indemnity."

5. A GERMAN VIEW OF THE RAW-MATERIALS BOYCOTT[1]

The Central Powers are fighting for their integrity and capability of development, and, since they are industrial nations, this implies unimperiled imports at all times—that is, what we commonly understand by the expression "freedom of the seas." A peace that does not provide for this in a practical manner is not a peace that the Central Powers can conclude, and they will not conclude it unless the Entente can give us the "knock-out blow." . . . . If the Entente holds to its threat, and it is not possible to carry through the supply of raw materials as a peace condition, then the war will go on; the sole question that arises is, Are the Central Powers sufficiently strong economically to hold out in the future against the stoppage of raw materials? That the Entente is no match for them in the field is now

[1] Adapted from Herr Dernburg's "Economic Outlook," *The New Europe* (June 27, 1918), pp. 258–61.

Ed. Note.—Early in the war Dernburg visited the United States as the official spokesman of the German government.

even clearer than before. There is absolutely no doubt that, in this respect, our prospects have extraordinarily improved. An immense sphere lies open to us in the East. It will need time and patience to organize the future of it; but as we *alone* have the supply routes in our hands, we can shut out all competition from others and stretch out our suckers far into the interior of Asia. It is just as little in doubt that the horizon is permanently darkened for our enemies' supplies. Little by little the food shortage is taking on the same acute forms with them as in Central Europe; we can say, moreover, that, since, as a rule, foodstuffs have the precedence in transport over raw materials, the supply of raw materials, too, must have become extraordinarily scanty for some, at least, of our enemies.

The threat of Wilson also has only this meaning—that he opposes the boycott of raw materials as a compensation to the great territorial successes of the Central Powers in the East and West (against which the Entente have nothing to show except the German colonies and small portions of the Turkish Empire); the President indicates by this what will, among other things, be discussed at the peace arrangements. It is useless to hide from ourselves that we are concerned here with an object of compensation of very great importance; that is obvious from the situation. Even in the event of the return of the German colonies with the addition of a good slice of Africa as well, the Central Powers will not be able to satisfy their own demand for raw material. There are, moreover, but very few neutral producers; neither Sweden nor Spain nor the Dutch colonies can supply us with what is necessary, even if they supply valuable contributions. The rest of the world, however, with the exception of Mexico, the Argentine, and Chile, is fighting on the side of our enemies, and since the sovereignty of all these states empowers them to direct their exports and imports in any direction they desire, there will be nothing to prevent them from continuing their war legislation even after the war. England and her dominions have already begun this: England has recently introduced the "Non-ferrous Metals Act," whereby all the non-ferrous metals of the British Empire—that is to say, precisely those which we need—may be sold for five years after the conclusion of peace only according to the instructions of the Board of Trade. A complete substitute for the trade with three-quarters of the world and for the absence of their raw materials will, in spite of the enormous growth of the substitute industries of the Central Powers, be impossible for us. And since there are still a great number of people who look at things accord-

ing to the position on the European war map, a reference of this kind is not without importance.

When peace comes, then, one of the most important points for the Central Powers, who for decades have had their orientations overseas, must be the reopening and the keeping open of the export markets and those of raw materials; the freedom of the seas must be attained.

Once military operations stop, economic life again comes into the foreground; indeed, begins to dominate everything. Now, how are these scanty raw materials to be divided? I have already said that a great part of them is in the hands of the states, and that, in view of the shortage, the whole world will inevitably be rationed. . . . . In other words, the distribution of raw materials and of a portion of articles of consumption will, for a certain time, which should be as short as possible but will not be short, have to rest in the hands of the states. That is extremely regrettable from the point of view of personal initiative, international commerce, the development of means of communication, and the technical progress which depends on individual creative activity. But it is an inevitable result of this world-conflagration and the means employed in it. Any other solution delays convalescence and keeps prices up. Imagine all the traders of the world let loose on the shortage, both of raw materials and of transport. The inevitable result would be an immeasurable increase of freights, an enormous rise in all raw-material price, friction and difficulties, and also—since it is not everybody who has at hand the means of payment—a universal slump in the exchange, which has already become shaky through the diminution of cover. That this prognostication cannot be mistaken is shown by the measures which have already been taken everywhere in the various countries for transitional economics. In view of the impossibility of forming an exact estimate of the situation as it will be on the conclusion of peace, these measures naturally stop at the national frontiers, and leave open the question how the goods are subsequently to get within them, and who is to receive them there. But even in these preliminary arrangements it is the state which reserves to itself the distribution and rationing, the amount of importation, and the method of payment, with the aid of the special organization of the industries concerned. These tendencies evoke a storm of protest in many quarters as a result of feelings which, as I have said above, I share. That does not alter the fact that in this case a virtue must be made of the necessity, and there are no other ways which secure success. Experiments

we cannot afford. Just as at home a rational distribution of raw materials and cargo-space—which means also of the export of freight goods—cannot be avoided, so also the situation requires international distribution, and both must be in the hands of the states, and internationally guaranteed by international convention imposing obligations on the states, and not leaving a free hand to private persons, i.e., a League of Nations for the universal world-provision of a humanity suffering from impoverishment of raw materials. A thing of this kind cannot be attained in the event of a pure might peace. It requires a peace by understanding, for which we are now, as always, ready, but which can only be concluded when our opponents have arrived at a similar condition of reason.

6. INTERNATIONAL CONTROL OF RAW MATERIALS[1]

It appears certain that at the conclusion of peace the struggle for basic raw materials will be the predominant factor in the international situation. It is conceded that it cannot be left to the free play of individual competitive forces in the various countries, and if the various nations be allowed to engage, as nations, in the purchase of raw materials from private sellers there is virtually no limit to which the price as set by competitive national bidding might go. It would be similar to the wheat situation two years ago when European nations set up what practically amounted to an unlimited demand. Speculation under such circumstances becomes rampant and ungovernable, because wholly unpredictable (non-business) factors are at work. Another possibility is one in which we have neither private buying nor private selling—in which foreign trade as a whole is controlled by the respective governments. This appears to be a simple necessity if we are to prevent the utter disorganization of international trade.

Now governmental control of the export and import of raw materials involves in the nature of the case international control—commercial agreements must be made on the basis of international needs. And if we are to lay the ghost of future trade rivalries, Germany must be freely accepted as a party in such an international organization. The needs for materials on the part of the various nations are to a considerable extent reciprocal, though some of the present belligerents are obviously much better equipped in respect to raw materials than others. But if the United States, for instance, were for this reason to

[1] An editorial.

attempt a selfish policy of retaining its own supplies entirely for its domestic requirements it would not only incur the enmity alike of present allies and foes, but it would at the same time seriously weaken the basis of its own international trading operations for the future—weaken it not only because of the rivalries thus engendered, but also by delaying the recovery of business prosperity and crippling the exchange power of those with whom we hope to trade.

An international control of the distribution of raw materials as between nations appears therefore to be indispensable, both for recuperation from the ravages of war and for laying the basis for amicable trade relations in the future. And let it be repeated that to exclude Germany from participation in such international organization is certain to intensify the international trade rivalries which have always been such potent causes of war. Germany's need of raw materials is such, in fact, that the Allies have in their superior resources a most effective weapon for forcing Germany to play the game fairly. But if perchance the conditions of peace are not such as to bring Germany into such an organization, then we may as well look forward to continued international friction.

The opportunity for laying the basis of international trade co-operation that the end of the war will afford is unique and may never occur again. The absolute impossibility of leaving the immediate situation to the free play of competition between traders makes it easy to establish an international organization when it would otherwise be utterly impossible. If only the Central Powers can be included on equal terms we may find it possible to utilize this war readjustment period in building the foundation of a new order in nternational trade relations.

LXVII. Struggle for Foreign Markets

1. GERMANY'S FOREIGN TRADE PREPARATIONS[1]

If you think for a moment that the Germans will be so crippled at the close of hostilities that they will be unable to turn their attention to reknitting the rents which have been torn by American and British manufacturers in the foreign trade net of the German Empire,

[1] By P. Harvey Middleton. Adapted from "The Powerful Foreign Trade Combinations of Europe," *Railway Age* (April, 5, 1918), pp. 884–85.

Ed. Note.—Mr. Middleton is executive assistant of the Railway Business Association.

ponder for a moment over the fact that there has just been launched in Hamburg the Corporation for the Promotion of German Foreign Trade, with an initial capital of $5,000,000, for the purpose of exploring foreign markets and building new foreign railways. The *Kolnische Zeitung* gives the following summary of this Association's plans:

"This great new concern is to occupy itself exclusively with the development of German overseas trade. Important export houses, manufacturing corporations, shipping lines, and banks in Hamburg and all the other commercial and industrial centers of the Empire will be interested. The company is to serve as an active and efficient axis, round which all Germany's efforts to reknit her old relations and establish new ones will revolve. It is not to be a bank in the ordinary sense or an export bank. It will, on the contrary, refrain from banking operations of the usual sort. It will act primarily as a syndicate for exploring foreign markets, and when advantageous opportunities present themselves will fulfill the functions of a financial promoting company. It will take up, on behalf of all German interests concerned, promising projects abroad, such as waterworks construction and operation, railway building, harbor and dock works, and transactions of similar magnitude. These the company will not only promote and carry out, but if necessary provide the money for. The initial capital of $5,000,000 is wholly provisional. It will be multiplied many times over as required."

But perhaps you are deluding yourself with the belief that Germany will not have any ships, that we have captured all their big ones, and that embargoes have prevented their getting the materials to replace them. Wrong again. The *Berlin Tageblatt* publishes details of the development of the German shipbuilding yards, showing that in 1916 and 1917 all the private yards, except some of the largest, like the Vulkan concern, increased their capital. Blohm & Voss of Hamburg raised their capital from $3,000,000 to $5,000,000, and the Howaldt yards at Kiel raised theirs from $1,000,000 to $2,500,000. In other respects the German concerns have anticipated the needs for the reconstruction of the German merchant marine. The Hamburg American Line and the Allgemeine Elektricitats Gesellschaft have founded the new Hamburg Shipbuilding Company, and among the new establishments and projects are two at Lübeck, one at Hamburg, several at Stettin and Emden, and one at Tonning.

At the Vulkan yards near Bremen the Hamburg American line recently launched a 16,000-ton steel vessel, christened Rhineland, which is the largest ship ever laid down in Germany for purely freight-carrying purposes. The German press acclaims the launching not only as a sign of Germany's determination to make her presence felt in world-trade after the war, but because, despite the strain imposed on her industries for purely war purposes, her shipyards are able to turn out this "record-breaking" merchantman. The Hamburg American Line's 50,000-ton sister ship of the Vaterland, the Bismarck, has been completed, and this same line is credited with having at least one other giant and a flock of two-score or more medium- and small-calibred ships built and building. The North German Lloyd has completed a 35,000-ton express steamer, the Hindenburg, and is pushing work on an ambitious building program.

Do you know what a cartel is? It is the application of brute force to commercial enterprise. The concerns entering it renounce a part of their industrial and commercial autonomy in order to secure the advantages of cohesion. The cartel differs from the American trust in that it allows the individual enterprises attached to it to remain independent, and restricts itself to enforcing certain controlling principles in regard to production, prices, and competition. It aims at removing conflicts and losses resulting from ruinous competition and lack of organization. A uniform system of cost accounting and standardization of products eliminates waste. Only the strongest cartels undertake to influence foreign business, maintaining a firm export policy and exporting at lower prices than are charged home customers, finding foreign markets an excellent outlet for excess production.

The Stahlwerksverband or steel syndicate is, next to the coal syndicate, the leading German cartel. It monopolizes the production and distribution of steel in Germany. At the time of its foundation in 1904 it had a total output of 7,900,000 metric tons. Its products include rails, ties, fishplates, spikes, bedplates, structural steel, railroad axles, and steel forgings. The administration of the syndicate is vested in a general assembly of all the members, a supervisory council, and managing directors. The stock is exclusively in the hands of the owners of the steel works, and may be transferred only with the consent of the general assembly. Each member has one vote in the assembly for every 10,000 tons quota of production.

The Germans, through the Stahlwerksverband, are formidable competitors, not only because of the advantages of export bounties and freight rebates, but because they keep in close touch with the requirements of foreign markets through effective and expensive representation on the ground, and because the syndicate backs up the credits granted by individual manufacturers to secure initial business. This cartel believes in dumping in order to keep its plants working without interruption at maximum capacity. It controls over 90 per cent of the production of steel products in Germany. Before the war this cartel had an annual turnover of $238,000,000, and held down English steel production by delivering steel billets in England at lower prices than the English could produce steel. In 1914 steel bars were offered in New Orleans at $6 per ton below the lowest figure at which an American firm could manufacture them.

This steel cartel controls the sale of its products by merchants in Germany, Austria, Switzerland, Belgium, and France. It has been aptly termed a giant octopus, whose eyes are at Bremen, at Düsseldorf, and at Berlin, with tentacles, armed with innumerable suckers, reaching out to Asia Minor by way of Constantinople, threatening London through Rotterdam and Antwerp, stretching across Switzerland into Italy, extending over the Atlantic and South America, embracing Chile, spreading out over Brazil, Argentina, and Mexico, and in another direction to the Indian Ocean and the China seas, and fixing themselves firmly on the Far Eastern strands.

There are other German organizations for securing foreign trade in railway supplies. The Orenstein Koppel Aktien Gesellschaft represents a syndicate of producers of Decauville (narrow gauge) railway materials. This combination has practically stamped out the French and Belgian competition which formerly controlled the supply to Turkey. The Verband Deutscher Waggon Fabrikanten controls 90 per cent of the total German production of railway cars.

The Association of German Machine Tool Manufacturers has made a study of export trade with special reference to the competition of American manufacturers, whom they have actively opposed. The German Electrical Manufacturers' Association has made a special study of tariffs and commercial treaties, and secured many changes in both for the benefit of German exporters of electrical equipment. It keeps its members informed of new street railway and power plant projects in other countries, and suggests valuable foreign connections. German business men have realized the great importance of

commercial treaties and there is a special organization for this particular purpose—the Commercial Treaty Association (Handelsvertragsverein) with 9,000 members and 150 affiliated associations. Electrical equipment is controlled by two powerful syndicates, the Allgemeine Elektricitats Gesellschaft and the Siemens-Schukert.

2. GREAT BRITAIN'S IMPERIALISTIC PLANS[1]

1. The establishment, by government ownership or subsidy, of several great lines of steamships connecting the parts of the Empire, and an inter-Imperial scheme of deep-harbor development to accommodate the ships, 660 feet long, with 38-foot draught, calculated to have the ultimate practical economies of freight transportation which would make tariff discrimination unessential in Imperial preference.

2. A system of government rate regulation of shipping and marine insurance on routes between ports of the Empire.

3. Government control of at least one independent telegraph and cable line connecting all parts of the Empire.

4. Government encouragement of an extensive program of scientific research covering the production of manufacturing materials over the Empire and the best industrial uses of them, this research extending also to necessary sources of old and new supply even outside the Empire.

5. An English national and British imperial policy of preferential employment of British capital and British institutions in the development of Empire resources, including the encouragement of "home" establishments for the primary treatment and the manufacture of Dominion ores, materials, etc.

6. The foundation of the British Trade Corporation, not only to assist in the general expansion of British Commerce but to work out the financial phases of inter-Imperial development.

7. Intensive encouragement of old and new production and industry in the colonies, all parts of the Empire co-operating and co-ordinating the movement.

8. An Empire policy of preference for British industry everywhere in the supply of raw materials of which the Empire has a monopoly or a dominant position in producing.

[1] ED. NOTE.—This is a statement of the main features of the plans worked out by the Dominion's Royal Commission for the economic linking up of Britain with her colonies. This commission has been at work since 1912. Adapted from *The Americas*, February, 1918.

9. Empire-wide exclusion of non-British influence from public commodity and financial markets.

10. Uniformity of commercial laws in all parts of the Empire.

11. Reorganization of England's system of public commercial intelligence, including the establishment of a new ministry of commerce, a change in the consular services, co-operation in exchange of trade information with Dominion agencies, and an Empire department of statistical research.

12. Some measure of control of British emigration, at least to the extent of assisting migration to British dominions and colonies.

3. NEEDED: AN ALLIED ECONOMIC AGREEMENT[1]

In Lloyd George's pronouncements on economic restrictions to be imposed upon Germany after the war there is a rational core demanding serious consideration, however little we may like the spirit that appears to animate them. Without doubt it may be necessary to place ourselves in a position to impose drastic restrictions on German trade after the war. Control of world-trade will be found to be one of the chief bargaining assets of the Allies when peace negotiations are actually opened. Accordingly, whether Germany is to be admitted to equal participation in the benefits of such trade or to be placed under more or less severe handicaps are questions that ought to remain open until the proper time comes for closing them.

To take the extreme liberal position and proclaim that when peace comes, no matter on what territorial and political terms, Germany shall automatically come into full possession of equal trading rights is also to waste the allied assets at the peace conference. Germany will make no concessions on account of allied trade control if she is morally certain that the world's markets will be opened to her for nothing. She knows perfectly well that unless the Allies can present a solid front in matters of economic policy their control of trade cannot extend beyond the period of the war. Now, at the present time we are not presenting a solid front. Our European Allies may regard themselves as bound by the Paris Economic Agreement, but as Lloyd George points out, America has never subscribed to that agreement. Neither are our Latin-American Allies bound by it. If the peace conference were convened tomorrow, Germany would pretty certainly assume that the materials and the markets

[1] Adapted from an editorial in *The New Republic* (August 10, 1918), pp. 35–36.

of the greater part of the western continent would be accessible to her if she could finance her trade.

So long, then, as we have not arrived at a binding economic agreement with our Allies the Germans are justified in regarding allied control of trade as an asset of doubtful value, in no way to be regarded as an equivalent to alien provinces occupied by German armies. And this fact points to a necessity for prompt action. We cannot tell when Germany will make serious overtures for peace. We know, however, that the establishment of an economic agreement among all the nations at war with Germany is a work that requires time, and that this work must be accomplished before peace negotiations are opened, if we are to exploit the situation satisfactorily. And the initiative in the matter will have to be taken by America. We do not like the terms of the Paris Economic Agreement, which still appears satisfactory to our European Allies. Very well. What terms do we propose? Lloyd George does not directly raise this question, but it appears to be his obvious intent to suggest it.

In the first place, America would probably be willing to enter upon reasonable arrangements with her Allies for the control of raw materials after the war. There will not be enough of wool, leather, copper, tin, and many other materials to supply even the immediately pressing needs of the nations engaged in reconstruction. There will be a shortage of ocean carriage, a shortage of machinery and railway supplies, a shortage of wheat and meat. Rationing, under governmental auspices will be an imperative necessity. Under the most satisfactory conceivable peace terms we cannot permit Germany to enter the world's markets with her full power of commercial organization and wrest away supplies needed equally by allied nations more seriously impoverished by war than Germany herself. With the right kind of peace, Germany ought to get her share, and only an economic agreement thoroughly worked out in the near future can assure such an equitable arrangement.

But suppose that the war ends with Germany unrepentant, clinging to enough of her spoils to make plausible her claim to victory, what should our economic policy be? Plainly, the danger of a recrudescence of world-war ought to be paramount in our calculations. We ought to be equipped with a thoroughly elaborated policy for restricting German trade and industry in every possible way. An unregenerate Germany would use wealth acquired by trade as a foundation for future aggressive policies. The exclusion of Germany from

world-trade would work incidental losses to other nations, and these losses would be unequally distributed. For this contingency adequate provision ought to be made in the economic agreement. If Belgium, for example, finds herself permanently handicapped by loss of German markets and the entrepôt trade, it should be the business of the greater allied nations to find her new markets, to develop new possibilities of employment for her population.

So far, in principle, America would doubtless be willing to go. She would enter upon a plan for the equitable rationing of the nations after the conclusion of a satisfactory peace. She would accept her share in the costs of an economic war after, if Germany emerges from the present contest puffed up with a consciousness of victory and menacing the world with new disasters. An agreement covering these points would appear to America both fair and expedient. But an agreement going beyond this to a purely punitive policy, designed to treat Germany the more harshly the more completely she is forced to acknowledge military defeat, would encounter in America, not perhaps active opposition, but all the doubts and delays that characterize the negative side of American policy. It is an immense readjustment of ideas and institutions that is required of America before she can participate in any form of international economic union. She is likely to make such a readjustment if the sound objects of the proposed union are infected with purely punitive purposes.[1]

LXVIII. Territorial Problems

1. GERMANY'S POSITION IN THE EAST[2]

I. ECONOMIC INDEPENDENCE

Though Germany has failed or partially failed up to the present in the West she has succeeded in the East; and it must never be forgotten that it was with Eastern, not with Western, plans immediately in view that she sped the Serbian ultimatum on its way and backed it up by declaring war on Russia.

In this Eastern adventure Germany's aims can be simply stated. They are as usual twofold—partly military and partly economic. Her

[1] Ed. Note.—Cf. views of the British Labor Party, pp. 664–65.

[2] Adapted from *The Round Table*, March, 1917.

Ed. Note.—The quotation in Section I is from Dr. Spiethoff, professor of political economy at the German University of Prague, in *Die wirtschaftliche Anndberung zwischen dem Deutschen Reiche und seinen Verbundeten*, I (1916), 24. References to quotations in Section II are given in the context.

military object was and is to secure a military preponderance in the Old World by establishing a supremacy of her arms over Central and Eastern Europe and Nearer Asia. Her economic object is clearly stated in the following sentences from the opening essay in an authoritative work recently issued on *The Economic "Rapprochement" between Germany and Her Allies.*

The establishment of a sphere of economic influence from the North Sea to the Persian Gulf has been for nearly two decades the silent, unspoken aim of German policy. Our diplomacy in recent years, which has seemed to the great mass of all Germans (including the Germans of Austria) vacillating and little conscious of its aim, only becomes intelligible when regarded as part of a consistent Eastern design. It is to the credit of Rohrbach to have shown in his writings how the single incidents fit into the general scheme of our policy. It is indeed in this region, and in this region alone, that Germany can break out of her isolation in the center of Europe into the fresh air beyond and win a compact sphere of economic activity which will remain open to her independently of the favor and the jealousy of the great powers. Apart from the defence of hearth and home, no other success could compensate Germany for the enormous sacrifices of the war if she did not secure a really free hand, politically speaking, to pursue this economic goal. It is true that critical observers who have gone carefully into the details of the plan profess themselves skeptical of great economic results and emphasize the fact that the improvement of our relations with these regions cannot compensate us for the loss of our vitally important connections with the Great Powers and other states. They may very well be right. Nevertheless it remains true that a secure future for Germany is to be reached along this road and no other, and that Germany would be missing the greatest opportunity ever offered or likely to be offered her in the history of her foreign relations if she were not now to go forward with vigor and decision to its realization.

Here it is clearly shown that the Eastern aims in themselves will not at present meet Germany's economic needs. If she is no longer to be "dependent on the favor and the jealousy of the Great Powers" she requires a colonial empire in the tropics as well. Nevertheless the Eastern prize was well worth following up.

II. BERLIN TO BAGDAD

The economic side of Germany's Turkish program is no less important than the military, and it is around this that controversy most centers. It is best set forth in a series of quotations.

The following extract is taken from the chapter on Turkey in the large composite and obviously semiofficial book on *Germany and the*

World War, published in Berlin in 1916, to which most of the best-known "political" professors have contributed.

The great problem of German-Turkish relations is commonly summed up in the watchword "Berlin–Bagdad." Enemy statesmen have discerned in this the idea of a German political domination. They have spoken of Turkey as a German province, or at least contemplated a German "protectorate" over the Turks. Berlin and Bagdad are linked together as the termini of a mighty railroad that is now nearly completed—a line that will link up lands of widely different economic conditions and render possible an exchange between them which will make them independent of hostile competition, hostile attacks, and, above all, the command of the sea. What we have to deal with then is a *great closed economic territory as the basis of political friendship*. All the states astride the line—the German industrial states in the north, the Great Turkish agrarian state in the southeast, the Balkan States in the center—will remain free to carry on their own national affairs, but they all have the same interest in exchanging their goods along this artery of communication. Granted that in peace time heavy goods will be mainly transported by sea to save expense, yet the existing crisis has shown us the immeasurable value of a secure line of communication by land, a line which is comparable with the great overland railways of the United States.[1]

There speaks the voice of the bourgeoisie and the official classes. Let us add some representative testimonies from the working class. In the article already quoted, Robert Schmidt, a well-known Socialist member of the Reichstag and writer, says:

The peace which seems possible to us today will leave Germany and her allies in the eyes of Europe as a group of Powers whose sphere of economic control extends from the marshes of the Elbe to the waters of the Persian Gulf. Thus Germany, in close union with her allies, will have won by her arms the kernel of a great sphere of economic control worthy to be set as a closed economic system by the side of those of the other world-empires.

In 1915, before the entry of Bulgaria, a number of leading German trade unionists representing the chief industries of the country published a book entitled, *Working Class Interests and the Issue of the War*. It was a naked appeal to sectional self-interest in harmony with the dominant philosophy of the country. Trade by trade the German workman is told that defeat means ruin and victory more work and higher wages. But wherever the question of peace terms crops up the familiar exposition of Eastern policy reappears.

[1] Written by Dr. Carl G. Becker, of Bonn University.

A German commercial policy which met the needs of the Balkan States and, above all, of Turkey would bring with it invaluable consequences. It would bind those peoples more closely to Germany, because it would offer them mutual advantages and the possibility of cultural progress. It would suit the interests of the German consumer, because it would assure him of the import of foodstuffs independently of the sea and of England. It would also be of advantage to our industries. The procuring of *industrial raw materials* is extremely important for the trade unionist as for the manufacturer. Already today we are importing *wool* from those regions. With the improvement of methods of communication cotton production would assume a greater importance for Turkey, to the great advantage of the Central Powers. There is no reason to rely forever on the American supply or to be dependent on the development of Africa. Both these sources can be cut off from the sea. The straight road to Asia is open, however, if only these peoples can be *interested in the prosperity of Germany.*

Let us complete the picture by an extract from the most widely read, as it is also by far the best written, of all the books that have appeared in Germany on this subject—a very oasis in a desert of sand —Naumann's *Central Europe.* Attention has already been drawn in the *Round Table* to the significance of Naumann's book in connection with German domestic policy. His exposition of the underlying meaning and philosophy of Germany's Eastern policy is equally striking.

We have reached the heart of the constitutional problem of Central Europe. It consists *in the marking off of national government from economic government and military government.* The distinction is fundamental. We started, it will be remembered, with the idea of large-scale economic areas. The large-scale economic area of Central Europe must be larger than the existing states of Germany and Austria-Hungary. We have refrained, for obvious reasons, from mentioning the names of neighboring states to be brought in, merely stating in general terms that further accessions are necessary. But into what sort of a union shall they be brought? The answer is: a military union and an economic union. Anything over and above this would be superfluous and positively harmful. In all other matters there must be no derogation of political independence. It is therefore vital to delimit the military and economic functions so as to work them into a new central government. Let us take first the latter side of this new union, or, if the expression be preferred, the new economic state. This economic state will have its own customs frontiers just as the military state will have its trench defences. Within these frontiers it will promote a wide and active interchange of commodities. For this a central economic government will be required which will be directly responsible for part of the

economic arrangements concerned and will advise the national governments as to the remainder. Customs, the control of syndicates or trusts, organizations for promoting exports, patents, trade-marks, etc., will be under central control. Commercial law, traffic policy, social policy, and similar matters will be only indirectly within its purview. But the supernational economic state, once established, will steadily increase its powers and will gradually evolve an administrative and representative system of its own.

2. GERMANY'S COLONIAL AIMS[1]

GERMANY'S WAR AIMS

What sort of a colonial empire did Germany hope to attain after winning the freedom of the seas? It is worth while quoting one statement of Germany's colonial demands, not only because it conforms so closely to the popular canons, but because it is from the pen of a man who has more than once endangered his academic position by the moderation of his views.

> The first and most important of all the national demands [says Professor Delbrück] which we shall have to make when the time comes for the signing of peace must be a demand for a very large colonial empire, a German India. The empire must be so big that it is capable of conducting its own defence in case of war. A very large territory cannot be completely occupied by any enemy. A very large territory will maintain its own army and provide numerous reservists and second-line troops. If its main centers are connected by rail, its different districts will be in a position to support one another in case of need. A very large territory can have its own munitions and arms factories A very large territory will also have harbors and coaling stations.

And he adds in a footnote, "in order to prevent misunderstandings" and to explain what he means by "very large," that

> the Belgian and French Congoes by themselves cannot suffice for the German India which we must try to secure and have a right to demand after our victories. This equatorial territory may provide us with unsuspected treasures in the future, but so far as the next generation is concerned its extraordinarily sparse population will prevent it from being profitable to us; indeed, it would cost money. Only when the rich districts lying around it, which are now in English hands, are added on shall we have in sufficient measure the practical prerequisites for a German India.

These are not the day-dreams of peace. These words were written in April, 1915, after the big check in the West and before the Eastern drive. The views expressed in them are even now not abandoned.

[1] Adapted from the *Round Table*, March, 1917.

Writing in the February issue of a Berlin monthly review, an ex-governor of East Africa crosses the *t*'s and dots the *i*'s of Delbrück's statement:

> If Belgium, as we hope and as the Belgians hope, is to be divided after the war between Germany and France, vast portions of the Belgian and French Congo will have to be included in Germany's colonial empire, which we would then complete by the acquisition of British East Africa and Uganda in exchange for Kiau Chau, New Guinea, and the Australasian Islands. Such an empire could easily be defended from the sea, and it would have to be considered whether we could not exchange Togoland, which is isolated, for northern Rhodesia and Nyassaland. Germany would then have a colonial Empire worthy of her enterprising spirit, and it would yield us all the raw material we need.

Similarly the *Frankfürter Zeitung*, a conspicuously moderate paper, two months ago was still demanding "a compact colonial empire in place of our present haphazard acquisitions."

Nor is this attitude confined to the official and bourgeois classes. The Socialist majority, though shy about annexations in Western Europe, have from the beginning associated themselves with "imperialist" projects overseas. In an article dated January 17, 1917, one of their leading members, writing on terms of peace, demands for Germany "an extensive colonial territory which will enable her to import from within her own sphere of government the tropical products which cannot be grown on her own soil."

3. SUMMARY OF BRITISH WAR AIMS[1]

I. EUROPE

Complete restoration, political, territorial, and economic, of the independence of Belgium, and such reparation as can be made for the devastation of its towns and provinces.

Restoration of Serbia, Montenegro, and the occupied parts of France, Italy, and Roumania.

Complete withdrawal of the alien armies and reparation for injustice done, a fundamental condition of permanent peace.

With the French democracy to the death in their demand for a reconsideration of the great wrong of 1871, when, without regard to

[1] ED. NOTE.—Statement of David Lloyd George, on January 5, 1918, after consultation with the leaders of labor, representatives of the self-governing dominions of the British Empire, Mr. Asquith, and Lord Grey.

the wishes of the population, two French provinces were torn from the side of France and incorporated in the German Empire.

An independent Poland, comprising all those genuinely Polish elements who desire to form part of it, an urgent necessity for the stability of Western Europe.

Genuine self-government on true democratic principles to those Austro-Hungarian nationalities who have long desired it.

Satisfaction of the legitimate claims of the Italians for union with those of their own race and tongue.

Justice to men of Roumanian blood and speech in their legitimate aspirations.

II. ASIA AND AFRICA

Constantinople to remain the Turkish capital.

Passage between the Mediterranean and the Black Sea to be internationalised and neutralised.

Arabia, Armenia, Mesopotamia, Syria, and Palestine entitled to recognition of their separate national conditions.

German colonies held at the disposal of a Conference whose decision must have primary regard to the wishes and interests of the native inhabitants of such colonies.

III. GENERAL

Reparation for injuries done in violation of international law, especially as regards our seamen.

The establishment by some international organisation of an alternative to war as a means of settling international disputes.

4. RADICAL(?) VIEWS ON TERRITORIAL QUESTIONS

A. INTER-ALLIED LABOR AND SOCIALIST CONFERENCE[1]

The Conference considers that the proclamation of principles of international law accepted by all nations, and the substitution of a regular procedure for the forceful acts by which states calling themselves sovereign have hitherto adjusted their differences—in short the establishment of a League of Nations—gives an entirely new aspect to territorial problems.

The old diplomacy and the yearnings after domination by states, or even by peoples, which during the whole of the nineteenth century

[1] Ed. Note.—This is a statement of the Inter-Allied Labor and Socialist Conference, held February 20–24, 1918, Central Hall, Westminster, London.

have taken advantage of and corrupted the aspirations of nationalities, have brought Europe to a condition of anarchy and disorder which have led inevitably to the present catastrophe.

The Conference declares it to be the duty of the Labour and Socialist Movement to suppress without hesitation the Imperialist designs in the various states which, even in this war, have led one government after another to seek, by the triumph of military force, to acquire either new territories or economic advantages.

The Conference is of opinion that the main lines of marine communication should be open without hindrance to vessels of all nations under the protection of the League of Nations. It declares against all the projects now being prepared by Imperialists and capitalists, not in any one country alone, but in most countries, for an Economic War, if begun by any country, would inevitably lead to reprisals, to which each nation in turn might in self-defense be driven. The Conference realizes that all attempts at economic aggression, whether by protective tariffs or capitalist trusts or monopolies, inevitably result in the spoliation of the working classes of the several countries for the profit of the capitalists; and the working class see in the alliance between the Military Imperialists and the Fiscal Protectionists in any country whatsoever not only a serious danger to the prosperity of the masses of the people, but also a grave menace to peace. On the other hand, the right of each nation to the defence of its own economic interests, and, in face of the world-shortage hereinafter mentioned, to the conservation for its own people of a sufficiency of its own supplies of foodstuffs and raw materials, cannot be denied. The Conference accordingly urges upon the Labour and Socialist parties of all countries the importance of insisting, in the attitude of the government toward commercial enterprise, along with the necessary control of supplies for its own people, on the principle of the open door, and without hostile discrimination against foreign countries. But it urges equally the importance, not merely of conservation, but also of the utmost possible development by appropriate government action of the resources of every country for the benefit, not only of its own people, but also of the world, and the need for an international agreement for the enforcement in all countries of the legislation on factory conditions, a maximum eight-hour day, the prevention of "sweating," and unhealthy trades necessary to protect the workers against exploitation and oppression, and the prohibition of night work by women and children.

B. FRENCH SOCIALIST VIEWS ON COLONIAL POLICY[1]

Not all the peoples of the world have reached a stage of culture, political maturity, and economic development which entitles them to become sovereign states. Unhappily, international congresses have given no indication as to the course to be taken with regard to what may be called the non-adult peoples. They only warn us against "capitalist colonial policy." But we know well enough that capitalism, whatever may be the method adopted for joining or not joining these peoples to the European States, will always have freer scope among them than elsewhere. The problem is to find a means of ensuring that this capitalist colonial policy shall be controlled in the most effective manner possible; and of guaranteeing the fullest possible self-government to colonies and protectorates when they have developed sufficiently.

We do not think that colonial and protectorate countries can be left to themselves, and, as for distributing colonies, we do not know what principles to adopt for our guidance. We willingly assent to the proposal that her colonies should be restored to Germany.

We hope that the Socialist parties will make a particular point of giving close attention to colonial questions.[2]

[1] Adapted from *The French Socialist Party and War Aims.* (George H. Doran Co., New York, 1918.)

[2] Ed. Note.—Cf. President Wilson's statement of the Program of the World's Peace, p. 666.

XVI

AFTER-THE-WAR PROBLEMS

Introduction

The war is but a stage in a continuous process of economic and social development. With its termination will come no end of change and no cessation in the need of controlling development. On the contrary, there will gradually emerge a new situation, new problems, and the need of many new adjustments. The resources of the country, the organization of industry, and the services of the people which have been used for a single military end will have to be made to serve other purposes.

With the larger problem of the control of the transition to peace many questions are allied. The accommodation of industrial life to the demands of peace requires many physical adjustments. Our army must be returned from France, four or five million men must be absorbed into industry, the wear and tear of the war in plant and equipment must be replaced, and capital must be found for the conversion to new uses of plants supplying the government with goods of an annual aggregate value of more than ten billion dollars. But these mechanical changes are contingent upon the solution of far more complicated problems. They must wait upon the nature and terms of the coming peace; the establishment of an international understanding about credits, raw materials, and markets; the formulation of a plan for securing the incorporation of labor and plants now used for war work into the industrial system; and the redetermination of industrial relations between employer and employees. Even these problems are further complicated by the course of events which has attended the war. The establishment of new industrial standards, the enlarged domain of control, the changes in personal habits, and the newer conceptions of what is worth while in national and individual life have read themselves into the popular conception of each of these problems and must condition alike its statement and solution.

It is not the purpose of the readings which follow to enumerate the after-the-war problems, to resolve them into their elements, or to present even tentatively their solutions. An understanding of them

cannot be reduced to a few definite and general principles as were the problems of the economics of war. Some of them are the age-old problems of group and class and income which were with us long before the war and bid fair to abide for many a decade. Others are old problems such as that of maximum production from limited resources, seen afresh through the new vision which the war has brought. Still others, such as the international organization of credits and raw materials, seem to be new. But, old or new, the war has thrown them into a new situation; they require fresh analysis and defy solution by ready-made formulas. Further, compared with the simple end of military efficiency which underlies the war-time organization of industry, the peace ends, which condition the solution of all these problems, have the variety and subtlety of bewildering complexity.

This chapter, therefore, can do little more than give some perspective of the problems of the coming peace, indicate the dangers in allowing it to come upon us unawares, and point to the necessity of an intelligent attempt to meet them. Toward these very finite ends it is resolved into three parts. The first attempts to reveal by statement and illustration the nature of the larger problem of the transition to peace of which particular problems are mere aspects. The second has the double end of translating this general statement into the particular terms of a single definite and tangible problem and of revealing the most immediate of the after-the-war problems with which we shall have to deal. The third seeks to present in some typical examples evidence of the less immediate issues which the war has raised and which have to be taken into account in dealing with even the most immediate questions.

A solution to these enigmas is not to be found now. If their baffling uncertainty could be reduced to definite formulas, interest in them would be robbed of the daring sense of an intellectual adventure. This we can know: If as a nation we stumble upon peace unawares, there are grave perils for us, entailing a toll of costs to be paid for generations to come. If, on the contrary, by taking thought for the morrow, the crisis is met fearlessly and intelligently, serious trouble can be avoided. The problem is fundamentally one of understanding. Properly directed development is a growth; it is not born of tinkering. If as a nation we approach the coming crisis in a spirit of right-mindedness and intellectual adventure—we shall see what we shall see.

LXIX. The Nature of the Problem

1. REASONS FOR RECONSTRUCTION PROPOSALS IN GREAT BRITAIN[1]

The first reason for the agitation of industrial reorganization in England is that unrest in the industrial population has been constantly increasing. A well-informed London correspondent says mildly: "Some people have even developed a habit of talking of revolution in Britain as if it were a matter of course, this group being divided between those who declare it will come during the war and those who regard it as a matter of certainty after the war." The causes of this revolutionary spirit are to a certain extent identical with the causes which have lent impetus to the discussion of reconstruction. The fear of the workers that trade-union standards will not be restored, their hostility to the compulsory arbitration required by the Munitions Act, the growing separation between the rank and file of labor and its leaders—these have all created uneasiness in working-class circles and have turned the thought of the workers to ways and means of preventing a return to the pre-war industrial system, or at least to those features of it which were most objectionable to them.

In the second place, it is probable that the power now possessed by the "Triple Alliance" of trade unions is making the employers ponder the feasibility of some better system of checks and balances in the government of industry than is now known. For this alliance, composed of nearly two million employees of the railroads, the docks, and the coal mines, is in a position to cripple the traffic of the islands if it determines to make a stand in behalf of its demands. Whenever labor has the balance of power, employers become suddenly interested in the creation of parliamentary machinery for the amicable adjustment of disputes.

A third incentive to thought on reconstruction comes from the grave problems of demobilization, which are already being taken up on every side. In some way the reabsorption of nearly five million soldiers will have to be effected, while simultaneously munition plants will have to be diverted to the manufacture of other products and a policy of reconstruction worked out.

[1] By Ordway Tead. Adapted from "Some Reconstruction Programs," *Political Science Quarterly* (March, 1918), pp. 56–58.

Ed. Note.—Mr. Tead is a prominent American student of labor problems.

There is, fourth, the impetus which the guild socialists have given to the study of drastic reforms. They are avowedly anxious that, if possible, a transition to the national guild system be effected, or at least begun, immediately after the war. Their analysis of the needs of the hour has been well expressed thus: "The factors to be conciliated by the new social contract are (*a*) a more or less blind revolt against degrading conditions; (*b*) the imperative necessity of a more scientific efficient system of production; (*c*) the call for a higher spiritual and moral life; and (*d*) a revivified passion for freedom.

Fifth, the urgent need of reconstruction is being pressed by those concerned for high productivity and therefore for "harmony" and "co-operation" in industry. Stress is laid on the fact of the low per capita output of British workers compared with those of Germany and the United States; and limitation-of-output policies are condemned from every angle. Those who approach the industrial problem in this way are actuated by various motives. There is one motive, however, so sharply differentiated from the rest that it really becomes a separate cause of the reconstruction agitation, and should therefore be separately mentioned.

This sixth cause is the desire for the imperial supremacy of England, an end to be gained by greatly increased production at a minimum cost per unit of product. This reason is to be met in public utterances from widely different sources.

From every quarter, therefore, from labor-conservative and labor-radical, from employer and statesman, has come explicit statement that the industrial institutions of England are "rotten-ripe for change." Is it to be wondered at that from a dozen directions at once have sprung programs and schemes of reorganization? The remarkable thing is rather that these have been so few and that they have with one or two exceptions followed so uniformly along the same lines.

2. THE FACTORS IN THE PROBLEM[1]

The discussion above makes it evident that the problem of the transition to a status of peace is no mere problem of a "return." An intelligent approach to it is conditioned upon a clear understanding that it is not and cannot possibly be the problem of the restoration of the scheme of things existing on August 3, 1914, or on April 6, 1917.

The war has brought in its wake many new things which, however unexpected, cannot be escaped. The course of our development is an

[1] An editorial.

ever-changing one. The course of events enables us to discover hitherto unknown factors which are shaping our development, which have to be taken into account in any intelligent attempt to accommodate our lives, individually and collectively, to the circumstances under which they must be lived. It is too early and we are at too close a range as yet to get a clear perspective of these new things, or old things which look new. Yet, without a pretense of making a catalogue, some of these factors may well be presented for the light which they throw upon the nature of the transition problem.

Let us take as a first example the impulse which the war has given toward supplying modern industrial society with agencies of organization suitable to its needs. It has been with no conscious design and in terms of no preconceived plan that a nation made up of a large number of small rural communities was converted into a vast and intricate industrial society. So it is not surprising that thought was not taken that the nation should be supplied with the machinery necessary to the organization of its industrial life. A great deal of this belated machinery the war is supplying. To cite an example, it is hardly reasonable to think of abandoning a unified railroad system, and returning to a loose aggregate of individual lines, which involve much duplication of service and equipment, which were planned with little reference to each other, and which were built for a variety of reasons, running from sound investment to the most reckless speculation.

Or, to cite another example, we can hardly think of an abandonment of the organization of the labor market, which just now is in process of fulfilment. For decades one of our most serious problems has been that of getting men and jobs together. On the mere quantitative side we have been fairly successful, perhaps too successful, if judged by the number of contacts which have been established; for as the statistics of "labor turnover" so clearly indicate, the problem has been too habitually solved by getting square pegs into round holes. A retention of these and like devices for organization involves no clear-cut clash between group interests. They are mechanisms necessary to the full utilization of resources and the avoidance of waste. In a way they are not due to the war; for they involve the accentuation of tendencies clearly discernible before the war began. Their importance, for our problem, is evidenced by the thousand and one questions of their use which their very existence inevitably causes to be raised. The presence of such agencies and organizations mean that the return of men and materials will be effected under an organization

much better established than the one which we had when we went to war.

The discussion of organization suggests that the war is bringing with it an increased consciousness of our common dependence upon each other and of individual responsibility for the common good. Perhaps we believe as strongly as we did before the war that "the individual shall be free to do as he pleases so long as he does not interfere with the rights of other individuals to do as they please." But the real meaning of this axiom lies in its balance between one's own rights and the rights of others. A few decades ago lotteries, public drunkenness, and even political corruption were defended upon the first ground. Latterly the tendency has been to place increased emphasis upon the rights of others and to insist that "individual liberty" must be amenable to the common good. The acceptance of the principle of universal conscription, and a willingness to have a large share of one's income conscripted for a public purpose are but isolated cases of a nation-wide subordination of private to public good and to the necessity of control directed to the common end.

Implicit in this, but deserving of separate statement, is the clear conception of what may be called national economy, which has been brought home to the people at large. Through the food administration our people have learned that, however large the whole food supply, it is yet limited as compared with the uses to which we would put it, and that waste or extravagance by one person is taking food away from another.

Likewise, the war is bringing home to the masses the relationship of the individual's work to the total wealth of the nation. They are beginning to see that the result of the day's work is not a mere wage and that the two do not constitute an industrial whole, separate and apart; but that, on the contrary, any restriction of output or withholding of productive effort, "conscientious" or otherwise, is reducing the total wealth of the nation, which can never be large enough for all its needs.

Even more important is the distinction which the war is establishing between business and industry, between work and effort which is directed at profits and that which adds to the volume of the good things of life. Here it may be insisted that the feeling of solidarity of which these instances are mere examples is but of the war and for the war, and that since it will lapse with the war it need not be taken into account in considering the problem of the transition to a state

of peace. In reply it can be said that this new feeling is but the consummation of a tendency clearly in evidence before the war. The problem which it raises is that of transferring the feeling established by the effects of the war from a nation at war to a nation at peace, and of reading it into the new order of things. This problem offers a challenge which cannot be escaped. To allow a sentiment of such value to lapse without a conscious and determined effort to hold and use it would be nothing short of criminal.

In this country the ideal of large national output is beginning to lead to the employment of women in trades formerly closed to them, to the dilution of skilled with unskilled labor, and to a breaking down of the tradition which has kept skilled labor upon unskilled work. While as yet the change is small, the experience of England shows the lengths to which it may go and the size of the problem with which we shall have to deal if the struggle is a protracted one. The importance of large output is also rapidly teaching the American people the necessity of a careful conservation of the health, strength, and general physical efficiency of labor. The result is that the sheer necessity of turning out munitions in large volume is leading to a reconsideration of hours of labor and a general revision of living and working conditions among laborers employed on government contract. Thus, the national needs of large production are rapidly accomplishing a reform which it would have taken decades to effect in a system where all changes were considered simply with an eye to the immediate profits they might bring unimaginative employers. The latter change in this country is beginning to be associated with an inclusion of representatives of the laborers in the management of industry, an innovation which seems, in some places, at least, to have been accompanied by a decided improvement in the laborers' attitude towards his work and with a stimulus to his mind to devise ways for accomplishing given tasks more economically. It is futile to insist that what has been done and learned here can be erased and that a return can be made to pre-war conditions. But, on the contrary, if these and like changes are considered, it is evident that they bristle with problems in which neither the facts are well known, nor are future policies clear beyond peradventure.

In the realm of finance, too, problems are essentially new. Our tax policy, with its emphasis upon levies upon income and excess profits, is full of innovations as regards the nature of the taxes, the groups upon which their incidence falls, and their avowed use for

purposes of control. Yet, despite their novel character, they are but extensions of a new theory of taxation which is implicit in the tax legislation of the first Wilson administration. They seem to have disproved the argument so generally accepted before the war that taxes of such a nature and magnitude would kill "business enterprise," and a democracy which has learned to use them is not likely easily to be stripped of weapons so effective. Our currency and banking problems, too, demand a fresh approach. Not only has the price-level been radically changed from that which obtained in the spring of 1917, but its various elements are related to each other in such a way as to make the relative incomes of individuals and groups very different from those formerly obtained, thus changing for better or for worse their social positions. It is idle to insist that the steps which have brought this about can be retraced. If, as a result of changing prices, the standards of life and social positions have been disturbed to the disadvantage of groups that should fare better, the problem of adjustment will have to be directly faced.

Another aspect of the price-level raises a new and difficult series of problems. Because of the variety of means employed by the several warring nations in financing the war and the restrictions upon freedom of exchange which under ordinary conditions is depended upon to adjust price-levels among them, the price-levels are badly out of harmony. A conscious attempt to understand what is involved in this and to devise measures for dealing with it is imperative. And, lastly, the fundamental conditions of foreign trade have been affected, for better or for worse, not only by the break-up of establishments carrying it on, the diversion of ships to other uses, and the loss of organization, but also by the building of new ships, changes in the industrial systems of the belligerent countries, and, last but by no means unimportant, by changes in the minds of the people in their regard for, or their distrust of, other nations. Whether or not consideration be given to the changing mind of the people, the very definite changes which have accompanied it and the host of problems which they raise demand an approach to the problem of the transition to peace as something far larger and more complex than a simple problem of "resumption."

It must be added here, that the longer the war is continued, and the more thoroughly the scheme of arrangements and habits of thought which it inspires becomes habitual, the greater will be the necessity for a consideration of these things in formulating a program for the transition to peace.

In contrast with the problem of getting a nation satisfactorily back to a peace basis, the problem of preparation for war is simplicity itself. In the latter case the end to be achieved is a direct one. A nation has a limited amount of labor, materials, equipment, and other resources. The problem is to divert as large a part of this as possible into a surplus which can be used to arm, equip, and hurl at the enemy a military force large enough to overcome his. The end of an organization for peace has no such simplicity. It is not to turn out the largest possible aggregate of goods useful for a single end. On the contrary, it is bound up with a clash between the immediate interests of the several competing groups which make up the nation, between the more immediate and the less immediate interests of these groups, and between the desires of these various groups and an ideal of what is best for society as a whole. But this question is as important as it is nebulous. It might be fairly easy to settle it in terms of the production of the largest aggregate of wealth as measured in pecuniary terms or in terms of largest physical output. But the problem with which we are confronted must consider the kinds of goods produced as well as their quantity; it must give attention to the uses to which they are put as well as their volume; it must keep in view its distribution between groups as well as its appearance in the statistics of national income. It needs to consider that there is a social accountancy in which human utilities and costs are to be assessed and measured, as well as a pecuniary accountancy in which money debits and credits of individual businesses are marked up. This end may be vague, nebulous, and at best a concept which can be barely approximated; but its vague character makes all the more necessary an attempt to come by it intelligently. With it something is at hand to give at least a semblance of unity to a program which otherwise will be nothing but a jumbled heap of fragments. In approaching the problem of the transition to a status of peace, as in other matters, it is well to remember the new adage, "He who knoweth not what he seeketh, understandeth not what he findeth."

An intelligent approach to the problem requires an appreciation alike of its unity and of its resolution into a large number of complementary inquiries. The first of these demands that the general work of direction and the ultimate formulation of a program be vested in a single person or an independent body. The second requires the use of persons, agencies, and institutions who know the subject-matter of particular inquiries well enough to give the expert assistance necessary.

The argument for single direction of study and formulation of a program rests upon the unity of the problem. This unity is perhaps apparent from the discussion of the nature of the problem given above. It has, however, other supports which require a brief enumeration at this point.

Almost any problem of making the transition to peace involves a large number of other problems. To cite a particular example, it is necessary that the large amount of capital tied up in shipping shall be used productively when the war is over. To avoid scrapping the wealth which this investment represents, the ships must be used either in coastwise trade or in foreign commerce. Whether the railroads alone can take care of the greater part of our domestic commerce after the war is over, whether the use of the ships may be made to avoid a vast expenditure upon railroad development, or whether their slowness and the expense of transshipment which they entail are such as to confine their use to a very limited class of freight are questions which require examination. Likewise, the use of ships in foreign commerce depends upon the foreign commercial policy after the war, a matter that is contingent upon the terms of peace, our tariff policy, research in foreign trade, etc. It is needless to say that the departments of the government to which these detailed subjects properly relate must be used both in gathering the facts and in formulating policies. But it is manifest that the supervision of study and formulation of a program require unity of direction from some external source.

All the particular problems of the transition period have their being within a common environment and their solutions must be found within the limits which that environment allows. Not only are they, as we have seen, directly related one to another, but they are indirectly related to each other through their dependence upon a common scheme of life. An enumeration of a number of the general conditions to which particular proposals must conform will make clear this dependence.

An intelligent study of the problem must proceed in terms of a national society. At the end of the Civil War there was an abundance of free land; the nation consisted largely of an aggregate of semi-independent agrarian communities, and everywhere industrial opportunities were underutilized. If in the Northeast manufacturing was springing up and life was becoming increasingly urban, the industrial openings were many and there was still abundant room in

the West. Now the small community which lives by itself is gone; the economic system has become increasingly industrial, pecuniary, and urban. The interests of men run largely in terms of occupations, of industries, of particular groups. In addition, the single complex organization which is our industrial system has grown in defiance of state lines or other artificial political barriers. Even before the war we had a banking system which divided the country into zones in defiance of state lines. The war has given us, in the administration of transportation, coal, war industries, and other things, new divisions of the country into war zones, none of which are respectful of political boundaries. The tentacles which mark the connections of any business, or the lines which mark the assembly of the raw materials of any industry, or the radiation of its finished products, know no arbitrary boundary lines.

This situation makes it evident that the unity of a program cannot be achieved except by study and action on national lines. The proposal is heard frequently of late that each of the communities of the country work out its own problems of a return to peace. Certainly community participation in the discussion and settlement of these problems is to be encouraged, and there is little likelihood that the problems will receive more community thought than they deserve. But the larger questions at issue—the demobilization of men, their incorporation into trades, the determination of industrial relations, the control of industrial organization and activity—must be worked out in terms of industries which have a national existence and of a consistent scheme of direction which ignores state as well as community lines. An adaptation of a program to a society which is now national, industrial, and urban, and the necessity for stating each separate problem in terms of their common national and industrial environment, requires a common handling of them as mere aspects of the larger problem of a developing society.

Our national industrial society is a changing one. Enough has been said above to indicate that it is changing in the organization of men and materials into industries, in the general scheme of direction and control, and in the habits, customs, and modes of thought which lie at the basis of all activity. These changes are going on with peculiar rapidity during the course of the war. The program which the public demands will not only be very different from that which would have been demanded before the war, but what can and should be done will vary with the changes which attend the course of the war. Their

common dependence upon the social situation which peace will bring requires unity of treatment for the particular problems which constitute the general problem of transition.

The larger social environment which holds the particular problems of getting back to a peace basis is subject to great modification by the terms of peace. If the peace which is made is in reality an armistice, and competitive military preparations on a large scale are to continue after the war, the idea of making possible the use of the industrial system to turn out a maximum surplus of wealth for war uses must dominate any program for the organization of peace. Not only does this mean a reorganization of our educational system about universal military service, but that utility for war must be read into the design of every industrial establishment and the plan in terms of which they are organized into a system. It involves also a scheme of control for the system as a whole, as well as the creation of a military type of mind. But if, on the contrary, a peace is made which gives promise of proving lasting, the surplus wealth would more properly be devoted to other ends; a scheme of control different, because it has a different objective, would be adopted; and a different public opinion would be allowed to develop. In view of the comprehensiveness of these things every problem would in one way or another be touched. Thus, through their common dependence upon the terms of peace, the particular problems require unity of treatment.

3. ENGLAND'S MINISTRY OF RECONSTRUCTION

In July, 1917, the government proposed to Parliament the establishment of a Ministry of Reconstruction to continue for the duration of the war and for a period of two years, or less, after its conclusion. The functions of the Minister of Reconstruction who assumed office in August, 1917, are defined thus:

"To consider and advise upon the problems which may arise out of the present war and which he may have to deal with upon its termination, and for the purposes aforesaid to institute and conduct such enquiries, prepare such schemes, and make such recommendations as he thinks fit."

The business of the Ministry is to be acquainted with all proposals for dealing with post-war problems which are under consideration by government departments or committees or put forward by responsible bodies or persons, to study them in their bearings upon each other, to initiate proposals for dealing with matters which are not

already covered, and out of all this material to build up in consultation with the other departments for submission to the Cabinet, and ultimately to Parliament, a reasoned policy of reconstruction in all its branches.

For the purposes of administration the department has been divided into branches dealing respectively with commerce and production, including the supply of materials; with finance, shipping, and common services; with labor and industrial organization; with rural development; with the machinery of government, central and local, health and education; and with housing and internal transport.

Further, to assist him in considering the many and varied proposals which come before him, the Minister has created an Advisory Council representative of all the leading interests concerned in reconstruction, and it is his hope by consulting the council freely and regularly to secure a representative consensus of opinion on any proposal which may be referred to him for advice or which may be initiated in the department.

At the beginning of the year the chief questions immediately under consideration (in all cases in co-operation with the other departments affected) are:

A. COMMERCE AND PRODUCTION

1. The supply and control of raw materials after the war, which is being investigated by a committee.

2. Financial facilities for British commerce and industry after the war. A committee has been appointed with the concurrence of the Treasury.

3. The preservation of industries which will play an essential part in reconstruction, but are in danger of extinction through failure of supplies of material or labour. This problem is being dealt with in consultation with the Priority Organization of the Cabinet.

4. Financial risks attaching to the holding of trading stocks.

5. Trusts and combinations, with special reference to the protection of the consumer. Committees are being appointed to deal with both these questions.

6. The establishment of new industries after the war. A committee has been appointed to consider this question, as far as the engineering trade is concerned; it has already compiled a preliminary list of articles which might be produced in this country, and the Minister has appointed a parallel committee to consider the labour questions involved.

7. The volume and nature of the demand for British goods after the war.

8. Improvements in trade organization for the purposes of more economical production, distribution, and marketing, and of facilitating and expediting the turnover from peace to war.

These last two questions are being handled in consultation with the Board of Trade and the Department of Overseas Trade, and a comprehensive scheme of work has been prepared.

The Ministry of Munitions also is co-operating in obtaining information from the controlled establishments.

The problem may be stated thus: After the war there will be a world shortage of certain materials and the shortage will be accentuated by the difficulty of finding tonnage adequate to our demands. On the other hand, there will be an almost unlimited demand for manufactured goods.

The Ministry of Reconstruction, in concert with the Board of Trade, has undertaken to estimate and analyse the supply. The Board of Trade and the Department of Overseas Trade will, it is hoped, by enquiry of the trades themselves, of the Dominions, Colonies, India, and Allies, and by examination of other sources of information, produce a corresponding estimate and analysis of the demand, and the results of both enquiries will be used to determine in what order demands shall be met which cannot all be met at once, in what proportion raw materials shall be directed into certain channels, in what directions the demand for labour, power, tonnage, and credit is likely to be most intense, and what emergency arrangements will be required to meet it.

It is not a question of arbitrary restriction or of protecting some industries or developing others—it is a question rather of directing to the most productive purposes such materials as will in fact be available, and of furnishing industry with the necessary facilities, including information for making those purposes effective.

The desire of the government is to leave the industries to ration themselves under certain general principles for which the government must take responsibility. What those principles should be, and what form of central machinery should be devised for this purpose, is one of the first questions on which the Advisory Council is being asked to report.

B. FINANCE, SHIPPING, AND COMMON SERVICES

1. In conjunction with the Treasury, a committee has been set up to consider the question of currency and exchange after the war.

2. The Advisory Council on the Disposal of Government Stores has begun work.

This is a matter which the government regards as being of great importance. The total volume of surplus property which will be on the hands of the War Department at the end of the war will be enormous, and in dealing with it the government has two main objects in view. The first is to protect the taxpayer from improvident selling; the second is to protect markets and therefore labour from the dislocation which will inevitably result if, for instance, some tens of thousands of motor vehicles and some hundreds of miles of wire are released for sale at once.

They have decided, therefore, to entrust the whole executive arrangements for disposal to a specially created body, which will act as salesman for any government department having surplus stores to dispose of.

At the same time the general principles and policy governing any alternative form of use or disposal—for instance, whether certain goods should be sold in France or brought home; whether motor lorries should be thrown on the market or reserved for the use of public bodies for the development of agricultural transport—will be settled by the Advisory Council, for which the Minister of Reconstruction will be responsible. In other words, the Advisory Council will certify certain articles as disposable and will indicate the lines on which they are to be disposed of, and the executive body will then proceed within the limits laid down to make the best bargain for the taxpayer.

C. LABOUR AND INDUSTRIAL ORGANISATIONS

Trade organisations.—It has been agreed between the Board of Trade, the Ministry of Labour, and the Ministry of Reconstruction, that a concerted effort should be made to promote in as many industries as possible representative organisations to advise the government as to the views and needs of the industries on the various industrial and commercial problems that will affect them during the reconstruction period.

The creation of the organisations in question is not intended in any way to prejudice the formation of Joint Industrial Councils, but is designed as an emergency measure to facilitate the transition from war to peace conditions, and to expedite the establishment of permanent Industrial Councils and the determination of their functions.

The Ministry of Labour will, therefore, proceed with the formation of Industrial Councils, and the three Ministries will co-operate in the

establishment of the interim organisations referred to. For this purpose there will be a standing Conference on Trade Organisations at the Ministry of Reconstruction, consisting of three employers, three trade unionists, and representatives of the three departments. The functions of the conference will be, (*a*) to classify trades for the purpose of promoting representative organisations in each; (*b*) to advise as to the manner in which each trade should be approached, and the persons and existing organisations who should be consulted, and the matter to be placed before them.

A general survey of industrial policy as a whole has been prepared and the following branches are being examined in detail: the law relating to merchant shipping; labour in merchant shipping; war-time departures from trade-union practices; industrial courts; industrial structures; apprenticeship; reinstatement of returning soldiers and sailors; international labour legislation.

In agreement with the other departments affected, a survey has been undertaken of industrial methods. As a part of the enquiry, a special investigation has been made into the organisation of the woolen and worsted trade, as an example of joint control, and into the arrangements made in the West Riding dyeing industry for providing security of employment. The working of the Cotton Control Board is now being investigated.

An enquiry is being made jointly with the Ministry of Labour into the question of juvenile employment.

The Civil War-Workers Demobilisation Committee and the Women's Employment Committee are continuing their enquiries.

The question of army demobilisation has, apart from a few points which still remain to be determined, passed into the executive phase and is in the hands of the War Office and Ministry of Labour. Broadly speaking, the division of functions is that the War Office is responsible for the man until he leaves the army and the Ministry of Labour is responsible for him until he re-enters employment.

Since demobilisation must in the most favorable circumstances be a slow process and must be conducted in some order, the War Office and the Ministry of Labour will, in conjunction with the Ministry of Reconstruction, determine the priority of different trades on the basis of the information obtained by the Ministry, and on the general principle that the essential industries shall be served first. The results of the enquiries already referred to as to the post-war demand for goods and the supply of materials and manufacturing facilities will be available for their guidance.

In order that so far as possible surplus labour may be usefully and rapidly absorbed after the war, a complete list of public works which have fallen into arrears is being prepared.

D. RURAL DEVELOPMENT

The Ministry is working, in association with the Board of Agriculture, on land settlement; a general survey of agricultural policy has been prepared and the material is being brought together for a review of the land question as a whole. The question of instituting an enquiry into rating is under consideration. The following questions have received special examination:

1. The working of the Small Holdings Act, 1908, and the future of urban war allotments.

2. The report of the Forestry Committee has been published and a scheme has been prepared in consultation with the departments concerned for the consideration of the government.

3. The rural housing problem.

4. The organisation of county offices for advice and information on agriculture, on which proposals are being discussed by the Advisory Council.

5. Tithe redemption.

6. Village industries.

7. The Land Acquisition Committee has reported.

E. MACHINERY OF GOVERNMENT, HEALTH, EDUCATION, ETC.

1. Lord Haldane's committee on the distribution of functions between government departments is continuing its enquiries and negotiations are proceeding with the departments and outside bodies concerned with regard to the formation of a Ministry of Health.

2. The Committee on Local Government has presented a report on the functions of Poor Law authorities which has been published.

3. A Committee on Adult Education has been appointed and has made considerable progress.

F. HOUSING AND INTERNAL TRANSPORT

In consultation with the departments affected, a housing program has been prepared for submission to the Cabinet.

With a view to facilitating work in connection with housing the following committees are at work:

1. The Committee on the Supply of Building Materials is collecting information from the trade as to its probable requirement in material and labor.

2. The Housing (Building Construction) Committee set up by the local government board in consultation with the Minister of Reconstruction.

3. The Committee on Building By-Laws.

Special investigations have been made into the following points:

1. Control of public utility societies.
2. Town planning.
3. Rings in the building trade.
4. The working of the Small Dwellings Acquisition Act.

A general review of the problem of inland transport is now being prepared. The sections dealing with roads and canals are completed; the department is in consultation with the Board of Trade as to the future of the railways (including light railways) and an enquiry has been begun into the question of storage and distribution as essential elements in transport policy.

An important part of the work of the Ministry is the examination of all proposals from a legal point of view with a view to determining what amendments of the existing law are involved. Side by side with this the large volume of emergency enactments and orders has to be reviewed in its bearing on the immediate post-war problems and the situation that will be produced by their expiry or repeal.

LXX. The Problem of Demobilization

1. THE TASK OF DEMOBILIZATION[1]

The most immediate and perhaps the most important problem of the transition from war to peace is that of demobilization. If it involved only the discharge of soldiers from the army it would be simple and its solution easy. But because of the vast scale of modern warfare and of its use of the whole of the economic system, this is but a part of a comprehensive process of economic reorganization. Not only are soldiers to be discharged, but plants are to be turned to new uses, and their equipment re-made to serve new ends. There is involved also the use of technique which the war has built up, and of an organization necessary for the production of materials useful in

[1] From a confidential report to the United States government.

war. Already factories have been devoted to new ends, and the paths of trade, the markets, and the organization of separate establishments into trades and these into an industrial system have been profoundly affected. But the problem has a positive as well as a negative aspect. It consists not only in getting these men, materials, etc., out of war uses, but in getting them into peace uses. The question is, how can this be effected most quickly, with the least waste, and on relatively permanent lines?

If the problem is to be handled as it was handled in this country at the end of the Civil War, in England after the Boer War, and in almost every country after every nineteenth century war, it will be upon the simple theory that the function of the government is to discharge men from the army and to fail to renew munition contracts and then leave the reorganization of the industrial system for peace to the simple and obvious system of natural liberty. But note what is involved in this: Four or five million men, from the most skilled to the least skilled, are to be turned loose without employment or assured means of livelihood. Government contracts calling for materials valued at from twelve to twenty billions of dollars annually are to be canceled. This leaves a very large part of the industrial establishments of the country without immediate sale for their products, and forces them to look around for other markets. Potentially, at least, it throws out of employment a host of men and women much larger than the number actually discharged from government service. In view of these two conditions, a number of other things may be expected. The host of free laborers, all seeking employment, means, temporarily, at any rate, a glut of the labor market. The uncertainty about purchase of war wares and markets leads to caution on the part of the managers of industry. Those of the managers whose factories have become idle will be looking around for a chance which will promise the largest volume of profits, but the uncertainty attending so colossal a disturbance will require caution. The laborers who have no immediate employment, or who may expect lower wages, will be rather reluctant to buy goods whose purchase can be deferred. All history attests that a crisis of this kind, if the government does not intervene, will be accompanied by a period of falling prices. This discouraging of industrial venture on the part of employers tends to unemployment and underemployment, and to a delay in getting the industrial system organized to meet the demands of peace. In addition, if the government furnished no plan, there

is no assurance that the plants used to produce war supplies will be converted to peace uses without a great deal of waste, or that the laborers will be got into employment without a great deal of the knowledge, skill, and training which they now possess being wasted.

In most cases, too, the conversion of a plant to new uses will be dependent upon borrowed capital. This cannot be obtained unless there is assurance that the plant will pay. If only a few plants were to be converted, such assurance would be easy. If all war plants are to be converted and the lines of production into which they go are properly apportioned to each other, there is assurance of financial success, for they make a demand for each other's products. But, if the conversion is to be left to the judgment of the several manufacturers, each of whom in this period of transition tries to find the industrial opening which will pay best, there is sure to be serious waste, duplication, and a long period of delay. A concerted plan is necessary to avoid these costs. Such a plan, too, is for the best interest of concerns which require no conversion, or which can easily find for themselves industrial opportunities, for the profits of such establishments depend upon their sales and their sales are contingent upon having the rest of the industrial system occupied in making profits and the people busied with earning wages.

Such are the purely economic difficulties attending demobilization. But they are increased by others of a semi-economic or non-economic character. Note, for instance, the chance that in the depression which follows the war, which seems inevitable unless the government meets it with a plan, many of the gains of the war are likely to be lost. Much has already been done toward teaching the laborer the relationship between his own product and social welfare, and in showing the nation the gains which come from making this product as large as possible, but it will be very difficult if not impossible to keep these ideas alive if a large part of labor is unemployed and if the industrial system is half-stalled. Much, too, has been accomplished in maintaining the rates of wages high enough to give a living large enough to assure high production and efficiency, in regulating hours, in improving housing conditions, and in the establishment of a national minimum for living and working conditions. The maintenance of these gains depends partly upon the ability of the employer to finance them and partly upon a demand on the part of the laborers that they be maintained. With industry running at full blast and with full employment both of these conditions are assured; but if the industrial system

is running half-stalled they are threatened. The plant which is built to turn out a certain fixed output at the smallest cost per unit has its profit seriously threatened if its sales are reduced by only a small percentage, and in view of this the employer finds it necessary to reduce costs in every conceivable way if he is to survive. A reduction of wages and lowered living standards become the inevitable results.

A political consideration leads to the same end. At the end of the war a very considerable portion of the industry of the country will be producing goods on government contracts. They buy their materials from other industries. They are connected with financial institutions. They give employment to millions of men and women. The government contracts are the source of prosperity in the towns in which they are situated. It is needless to say that they will be very apprehensive of the withdrawal of government contracts. In the absence of a constructive plan which assures to them continued business and a chance to continue the employment of their workers, they are certain to attempt to maintain a market for their wares. It is not only possible, but almost certain, that in this event a great munitions lobby will be established, with the object of insuring continued government contracts. This will have the support of the munitions manufacturers, of those in related industries, and of the laboring classes dependent upon these business men for employment.

It is not the purpose of this memorandum to suggest a plan for demobilization, but rather to indicate the need, (1) of an intelligent study of the problem in all of its ramifications and, (2) of the formulation of a constructive plan which aims at supplying the one thing necessary to a successful transition, namely, organization. To that end the following tentative suggestions may be made. While they are not definite and are very tentative, they are all mere corollaries of the discussion given above.

a) A careful plan must be formed for the demobilization of men in the army. It seems clear that this demobilization should be gradual and not sudden, and should be dependent upon the ability of the industrial system to reabsorb the discharged men. In this connection it seems that demobilization should be in accordance with economic needs rather than by military units; but economic needs are not to be interpreted as the demobilization of all of a certain trade at one time. On the contrary, since various industries fit into an intricate system and various occupations are part of a single process of producing goods, it is necessary that men of varied occupations be

released at one time. This suggests that a contingent made up of men of a number of occupations in proper proportions to each other be released at one time, another like contingent later, etc. This, in all probability, would involve a scheme of priorities in converting establishments to peace uses.

b) In lieu of government demands, there are many uses to which men and materials could be devoted during the transition period, and from which they could very gradually be withdrawn. In the first place, there is a great need for replacing machinery, equipment, and other capital goods worn out and made obsolete by the war. In the second place, men, materials, and plants can be used in the rehabilitation of territory devastated in the war. There is abundant use in France, in Belgium, and in Russia for men and materials, and a large part of the industrial equipment to be used there might well be manufactured in this country. Whether, of course, this is feasible or desirable as against other uses depends upon a number of questions which we cannot take up here, and if it is useful or desirable a practical plan for its accomplishment depends alike on the treaty of peace, the scheme of international credits, and a number of other considerations. In the third place, men and materials might well be used in irrigation, in forestation, and in railroad building, for all of which there was a demand even before the war. The great danger in such use is that the projects may be unproductive. To avoid that, it is very necessary that they be carefully canvassed by experts. If this is done and if we are willing to wait for returns, there seems small reason for thinking that such use would not be sound public policy. Besides, if this leads to full employment of plants and men, and in this way insures the running of the industrial system at something like its full capacity, the costs will more than be met by increased productivity in other lines.

c) Another problem is that of plant conversion. This can be handled best by means of some person or body familiar with the economic system, the demand for goods in peace times, and the technical possibilities of the several factories. If a series of factories good for certain uses is to be converted into a series good for quite other uses, it is important, first, that the new uses be those most important in view of peace conditions, and, in the second place, that the scheme be arranged so that the factories can be converted with the least aggregate waste. This cannot be done by allowing each employer by trial and error to find his new market. Here the advice of technological experts working with the knowledge of economic conditions is indispensable.

d) Some plan for the extension of government credit to plants which have to be converted to peace uses seems almost unavoidable. Such extension of credit removes the danger which the chance of not making profit imposes on business enterprises and makes possible the full employment of men; since the great lack is one of organization, such an extension of credits, if conditioned upon the willingness of the companies to engage in the respective lines of production pointed out by the government, will assure a transition without depression; for as we have said, if properly organized, the various concerns will make a demand for each other's products. Here it needs to be added that if the government offers credits it is in position to impose conditions. These conditions should include specifications as to wages, hours, living, and working conditions. This is a device, which, if properly used, will not only insure that the transition period be made without depression or serious social waste, but can be made of account in making permanent the gains in industrial relationships which the war has brought with it.

e) These suggestions, as indicated above, are tentative. They point rather in the direction of investigation than definitely toward a program, but altogether they indicate the comprehensiveness of the problem, the intimate relations between the various problems which make it up, and the necessity of a unified, consistent, and constructive program for meeting it.

2. WILL THERE BE A SEX WAR IN INDUSTRY?[1]

The problem is a problem of adjustment; of the distribution of labour, skilled and unskilled, male and female, among the various existing and potential occupations which the return of peace conditions will offer. And from the workers' point of view it is predominantly a question of how to stifle the renewed competition which will necessarily prejudice the bargaining power of Labour in the coming scramble for the produce of industry. It has special reference to the outstanding problem of how to deal with the army of women workers which war conditions have called from home duties or unenterprising idleness, as the case may be. It is here that we see looming ahead of us the horrible possibility of something like an industrial sex war, in which the men's trade unions, and no doubt, for sentimental reasons, a large section of the public will be on one side, and the

[1] By Mary Stocks. Adapted from "The Future of the Woman War Worker," *The Athenaeum*, No. 4625, pp. 21–23.

industrial women, supported by the employers for purposes of their own, on the other.

Broadly, the position of the women is this: In normal times they have had, for various reasons, to put up with a wage-level considerably below that of the corresponding class of male wage earner. Among these reasons we may include their inferior physical capacity in a number of occupations; their lower subsistence-level, resulting from the general absence of dependent families and the frequent existence of home resources independent of their industrial earnings; the temporary nature of their industrial careers, resulting from the fact that they frequently regard industry as a stop-gap pending marriage; and the consequential absence of vital and lifelong interest in industrial conditions which is the moving spirit of an effective trade unionism. These are among the interacting causes of the inferiority of women's earnings; but the widest and most profound cause lies in the fact that women, though of course constituting a minority in the industrial world, are nevertheless competing for employment in such a comparatively restricted area that the competition among them is more intense than it is among male workers. To put it metaphorically, the volume of the flood is less, but its channel is relatively narrower; therefore its action is more destructive.

When we begin to inquire into the reasons for this restriction we find ourselves lost in a perfect maze of speculations. To begin with, obviously the genuine physical limitations of women must necessarily impose a natural barrier to a whole host of occupations. Supposed physical limitations not improbably add to the number. In addition there are less definite social causes, such as differential factory legislation, the inconveniences of a mixed staff, and the liability of women to get married, which must account for a considerable restriction of the demand for their labour. And behind all this brood many centuries of tradition, custom, prejudice, and sex jealousy.

With the development of war conditions, however, some very profound modifications have occurred in the conditions sketched above. In the first place, the urgent national necessity of replacing the large numbers of men withdrawn from the labour market has accounted for the dissolution of much irrational prejudice against women's work, and broken down innumerable barriers of custom and tradition. And under the hard schooling of necessity the economic world has learned that much of the physical and mental incapacity, much of the administrative inconvenience, of women workers has

disappeared under the test of actual practice. In the second place, the heavy war mortality among young men must mean that, for a generation at least, large numbers of young women will have to find in the world of industry the main interest of their lives, though how far this fact will affect their industrial psychology it is, of course, impossible to estimate.

When we come, therefore, to re-examine the old causes of inferiority, we find that while many of them remain presumably unaltered, one or two of them have been profoundly affected. First and foremost the field in which women are competing for employment has been almost indefinitely extended; and it has been so extended as to include grades of comparatively well-paid work hitherto closed. Women workers remain, for the most part, unorganized, an easy prey to industrial exploitation; but given the will to combine and the power to bargain collectively, circumstances point to the possibility of better conditions for women workers in the near future. But of course all this presupposes the continuance of the new opportunities; takes for granted that what is now open will necessarily remain open. Will it? Certainly much of it will, for there is no mending of broken traditions and no re-erecting of shattered illusions; but there is such a possibility as the rebuilding of industrial or professional barriers for reasons other than the actual capacity of women to do the work; and that brings us back to our opening problem, the readjustment of industrial conditions when a demobilized army returns to the labour market.

Now it must be remembered that much of the old exclusion of women from skilled industrial processes was the result of trade union regulations—agreements forced upon the employer by organized male labour. Women were regarded, and not without good reason, as undesirable fellow-workers where a comparatively high standard of life was to be maintained. And when the exigencies of war made it necessary for Mr. Lloyd George to promote the utilization of female labour in skilled industry, he found himself up against one of the most cherished and hard-earned privileges of the British trade unionism, and, as is well known, was only able to obtain the suspension of that privilege on the definite understanding that, after the return of peace, the said trade union regulations should be fully and legally re-established. Although in the meanwhile industrial processes have undergone such revolutionary changes of mechanism and organization as to render the literal fulfilment of that pledge appallingly difficult, if not practically impossible, yet Labour holds, as it were, an I.O.U. against

the government, and will be in a position, when the time comes, to demand its discharge in the spirit, if not in the letter. The spirit at the present time, if straws show the way of the wind, is undoubtedly an exclusive one as far as the woman war worker is concerned. Nor is the problem confined to those occupations where definite trade-union regulations have been suspended. The woman bank clerk, like the woman engineer, will, in days to come, find herself confronted by a male predecessor whose standards of remuneration, and probably of professional efficiency, are higher than her own.

Given the above-described circumstances, the situation to be avoided at all costs is one in which the trade unions will be fighting on one side for exclusion, women on the other for employment; the latter backed whole-heartedly by the employers in search of cheap and comparatively docile labour power, the former backed half-heartedly by the government in pursuance of the pledges exacted in the hour of need. And the victory of either side will spell disaster. If the exclusive principle is carried through, women workers will find themselves at the mercy of trade-union regulations for the first time possessing the force of law, and flung back into the old degraded and inadequate industrial channels, where they will compete all the more destructively by reason of their swollen numbers. They will suffer, and their suffering will generate bitterness at a time when all the good will in the world will be necessary to face an uncertain future. Incidentally, the economic well-being of the nation will be prejudiced by the wastage of industrial capacity at a time when, with proper foresight and organization, the demand of industry for labour should be insatiable. Limitations on the power of industrial producers to produce will prove as harmful in the hungry years which must follow a world-war as they are in face of the rapacious requirements of war itself. On the other hand, if for some reason the spirit of the pledge is never redeemed, if the employers succeed in utilizing the mass of women war workers as a cheap labour supply for post-war industry and as a catspaw for the deposition of Labour's aristocracy, the result will be a serious menace to, if not the actual destruction of, such a life-standard as over a century of trade-union effort has painfully succeeded in building up. Here, too, will be a source of most disastrous and dangerous bitterness, and among that very section of the community, the home-coming army, which merits the first consideration of the nation.

LXXI. Some Programs of Social Reform

1. THE WAR AIMS OF AMERICAN UNIONISTS[1]

We are face to face with a world-crisis. We are in a world-struggle which will determine for the immediate future whether principles of democratic freedom or principles of force shall dominate. The decision will determine not only the destiny of nations but of every community and of every individual. No life will be untouched.

Either the principles of free democracy or of Prussian militaristic autocracy will prevail. There can be no compromises. So there can be no neutrality among nations or individuals—we must stand up and be counted with one cause or the other. For Labor there is but one choice.

The hope of Labor lies in opportunity for freedom. The workers of America will not permit themselves to be deceived or deceive themselves into thinking the fate of the war will not vitally change our lives. A victory for Germany would mean a pan-German empire dominating Europe and exercising a world balance of power which Germany will seek to extend by force into world-control. Prussian rule means supervision, checks, unfreedom in every relation of life.

Prussianism has its roots in the old ideal under which men sought to rule by suppressing the minds and wills of their fellows; it blights the new ideal of government without force or chains—political or industrial—protected by perfect freedom for all.

Unless the reconstruction shall soon come from the German workers within that country it is now plain that an opportunity to uproot the agencies of force will come only when democracy has defeated autocracy in the military field, and wins the right to construct relations between nations and men. The peace parleys between Russia and Germany have shown the futility of diplomatic negotiations until Prussian militarists are convinced they cannot superimpose their will on the rest of the world. Force is the basis of their whole organization and is the only argument they will understand.

Spontaneous uprisings in Germany in protest against the militarist government have shown that the German government is still stronger than the movement for German emancipation. German freedom is ultimately the problem of the German people. But the

[1] A statement drawn up by the Executive Council of the American Federation of Labor at a meeting held in Washington, February 18, 1917.

defeat of Prussian autocracy on the battlefield will bring an opportunity for German liberty at home.

We have passed the period when any one nation can maintain its freedom irrespectively of other nations. Civilization has closely linked nations together by the ties of commerce, and quick communication, common interests, problems, and purposes. The future of free nations will depend upon their joint ability to devise agencies for dealing with their common affairs so that the greatest opportunity for life, liberty, and pursuit of happiness may be assured to all.

This matter of world democracy is of vital interest to Labor. Labor is not a sect or a party. It represents the invincible desire for greater opportunity of the masses of all nations. Labor is the brawn, sinews, and brains of society. It is the user of tools. Tools under the creative power of muscle and brains shape the materials of civilization. Labor makes possible every great forward movement of the world. But Labor is inseparable from physical and spiritual life and progress. Labor now makes it possible that this titanic struggle for democratic freedom can be made.

The common people everywhere are hungry for wider opportunities to live. They have shown the willingness to spend or be spent for an ideal. They are in this war for ideals. Those ideals are best expressed by their chosen representative in a message delivered to the Congress of the United States, January 8, setting forth the program of the world's peace. President Wilson's statement of war aims has been unreservedly indorsed by British organized labor. It is in absolute harmony with the fundamentals indorsed by the Buffalo Convention of the American Federation of Labor.

We are at war for those ideals. Our first big casualty list has brought to every home the harass and the sacrifices of war. This is only the beginning. A gigantic struggle lies just ahead that will test to the uttermost the endurance and the ability and the spirit of our people. That struggle will be fought out in the mines, farms, shops, mills, shipyards, as well as on the battlefield. Soldiers and sailors are helpless if the producers do not do their part. Every link in the chain of the mobilization of the fighting force and necessary supplies is indispensable to winning the war against militarism and principles of unfreedom.

The worker who fastens the rivets in building the ship is performing just as necessary war service to our Republic as the sailor who takes the ship across or the gunner in the trenches.

This is a time when all workers must soberly face the grave importance of their daily work and decide industrial matters with a conscience mindful of the world-relation of each act.

The problem of production indispensable to preventing unnecessary slaughter of fellow-men is squarely up to all workers—aye, to employes and employers. Production depends upon materials, tools, management, and the development and maintenance of industrial morale. Willing co-operation comes not only from doing justice but from receiving justice. The worker is a human being whose life has value and dignity to him. He is willing to sacrifice for an ideal but not for the selfish gain of another. Justice begets peace. Consideration begets co-operation. These conditions are essential to war production. Production is necessary to win the war.

Upon the government and upon employers falls the preponderance of responsibility for securing greatest efficiency from workers. Standards of human welfare and consideration of the human side of production are part of the technique of efficient production.

Give workers a decent place to live, protect them against conditions which take all their wages for bare existence, give them agencies whereby grievances can be adjusted and industrial justice assured, make it plain that their labor counts in the winning of a war for greater freedom, not for private profiteering, and workers can be confidently expected to do their part. Workers are loyal. They want to do their share for the Republic and for winning the war.

This is Labor's war. It must be won by Labor and every stage in the fighting and the final victory must be made to count for humanity. That result only can justify the awful sacrifice.

We present these matters to the workers of free America, confidently relying upon the splendid spirit and understanding which has made possible present progress to enable us to fight a good fight and to establish principles of freedom throughout the whole world. We regret that circumstances make impossible continuous close personal relations between the workers of America and those of the allied countries and that we cannot have representation in the Inter-Allied Labor Conference about to convene in London.

Their cause and purpose are our cause and purpose. We cannot meet with representatives of those who are aligned against us in this world-war for freedom, but we hope they will sweep away the barriers which they have raised between us. Freedom and the downfall of autocracy must come in Middle Europe.

We doubly welcome the change if it come through the workers of those countries. While this war shall last, we shall be working and fighting shoulder to shoulder with fellow-workers of Great Britain, France, and Italy. We ask the workers of Russia to make common cause with us, for our purpose is their purpose, that finally the freedom lovers of all countries may make the world safe for all peoples to live in freedom and safety.

2. BRITISH LABOR AND THE NEW SOCIAL ORDER

It behooves the Labor party, in formulating its own program for reconstruction after the war, and in criticizing the various preparations and plans that are being made by the present government, to look at the problem as a whole. We have to make clear what it is that we wish to construct. It is important to emphasize the fact that, whatever may be the case with regard to other political parties, our detailed practical proposals proceed from definitely held principles.

THE END OF A CIVILIZATION

We need to beware of patchwork. The view of the Labor party is that what has to be reconstructed after the war is not this or that government department, or this or that piece of social machinery, but, so far as Britain is concerned, society itself. The individual worker, or for that matter the individual statesman, immersed in daily routine—like the individual soldier in a battle—easily fails to understand the magnitude and far-reaching importance of what is taking place around him. How does it fit together as a whole? How does it look from a distance? Count Okuma, one of the oldest, most experienced, and ablest of the statesmen of Japan, watching the present conflict from the other side of the globe, declares it to be nothing less than the death of European civilization. Just as in the past the civilization of Babylon, Egypt, Greece, Carthage, and the great Roman empire have been successively destroyed, so, in the judgment of this detached observer, the civilization of all Europe is even now receiving its death blow. We of the Labor party can so far agree in this estimate as to recognize, in the present world catastrophe, if not the death, in Europe, of civilization itself, at any rate the culmination and collapse of a distinctive industrial civilization, which the workers will not seek to reconstruct. At such times of crisis it is easier to slip into ruin than to progress into higher forms of organization. That is the problem as it presents itself to the Labor party.

What this war is consuming is not merely the security, the homes, the livelihood, and the lives of millions of innocent families, and an enormous proportion of all the accumulated wealth of the world, but also the very basis of the peculiar social order in which it has arisen. The individualist system of capitalist production, based on the private ownership and competitive administration of land and capital, with its reckless "profiteering" and wage-slavery; with its glorification of the unhampered struggle for the means of life and its hypocritical pretense of the "survival of the fittest"; with the monstrous inequality of circumstances which it produces and the degradation and brutalization, both moral and spiritual, resulting therefrom, may, we hope, indeed have received a death blow. With it must go the political system and ideas in which it naturally found expression. We of the Labor party, whether in opposition or in due time called upon to form an administration, will certainly lend no hand to its revival. On the contrary, we shall do our utmost to see that it is buried with the millions whom it has done to death. If we in Britain are to escape from the decay of civilization itself, which the Japanese statesman foresees, we must ensure that what is presently to be built up is a new social order, based not on fighting but on fraternity—not on the competitive struggle for the means of bare life, but on a deliberately planned co-operation in production and distribution for the benefit of all who participate by hand or by brain—not on the utmost possible inequality of riches, but on a systematic approach toward a healthy equality of material circumstances for every person born into the world—not on an enforced dominion over subject nations, subject races, subject colonies, subject classes, or a subject sex, but, in industry as well as in government, on that equal freedom, that general consciousness of consent, and that widest possible participation in power, both economic and political, which is characteristic of democracy. We do not, of course, pretend that it is possible, even after the drastic clearing away that is now going on, to build society anew in a year or two of feverish "reconstruction." What the Labor party intends to satisfy itself about is that each brick that it helps to lay shall go to erect the structure that it intends, and no other.

THE PILLARS OF THE HOUSE

We need not here recapitulate, one by one, the different items in the Labor party's program, which successive party conferences have adopted. These proposals, some of them in various publications

worked out in practical detail, are often carelessly derided as impracticable, even by the politicians who steal them piecemeal from us! The members of the Labor party, themselves actually working by hand or by brain, in close contact with the facts, have perhaps at all times a more accurate appreciation of what is practicable, in industry as in politics, than those who depend solely on academic instruction or are biased by great possessions. But today no man dares to say that anything is impracticable. The war, which has scared the old political parties right out of their dogmas, has taught every statesman and every government official, to his enduring surprise, how very much more can be done along the lines that we have laid down than he had ever before thought possible. What we now promulgate as our policy, whether for opposition or for office, is not merely this or that specific reform, but a deliberately thought out, systematic, and comprehensive plan for that immediate social rebuilding which any ministry, whether or not it desires to grapple with the problem, will be driven to undertake. The four pillars of the house that we propose to erect, resting upon the common foundation of the Democratic control of society in all its activities, may be termed, respectively:

A. The universal enforcement of the national minimum
B. The Democratic control of industry
C. The revolution in national finance
D. The surplus wealth for the common good

The various detailed proposals of the Labor party, herein briefly summarized, rest on these four pillars, and can best be appreciated in connection with them.

A. THE UNIVERSAL ENFORCEMENT OF A NATIONAL MINIMUM

The first principle of the Labor party—in significant contrast with those of the Capitalist system, whether expressed by the Liberal or by the Conservative party—is the securing to every member of the community, in good times and bad alike (and not only to the strong and able, the well-born or the fortunate), of all the requisites of healthy life and worthy citizenship. This is in no sense a "class" proposal. Such an amount of social protection of the individual, however poor and lowly, from birth to death, is, as the economist now knows, as indispensable to fruitful co-operation as it is to successful combination; and it affords the only complete safeguard against that insidious degradation of the standard of life, which is the worst economic and

social calamity to which any community can be subjected. We are members, one of another. No man liveth to himself alone. If any, even the humblest, is made to suffer, the whole community and every one of us, whether or not we recognize the fact, is thereby injured. Generation after generation this has been the cornerstone of the faith of Labor. It will be the guiding principle of any Labor government.

The legislative regulation of employment.—Thus it is that the Labor party to-day stands for the universal application of the policy of the national minimum, to which (as embodied in the successive elaborations of the Factory, Mines, Railways, Shops, Merchant Shipping, and Truck acts, the Public Health, Housing, and Education acts and the Minimum Wage Act—all of them aiming at the enforcement of at least the prescribed minimum of leisure, health, education, and subsistence) the spokesmen of Labor have already gained the support of the enlightened statesmen and economists of the world. All these laws purporting to protect against extreme degradation of the standard of life need considerable improvement and extension, while their administration leaves much to be desired. For instance, the Workmen's Compensation Act fails shamefully, not merely to secure proper provision for all the victims of accident and industrial disease, but, what is much more important, does not succeed in preventing their continual increase. The amendment and consolidation of the Factories and Workshops acts, with their extension to all employed persons, is long overdue, and it will be the policy of Labor greatly to strengthen the staff of inspectors, especially by the addition of more men and women of actual experience of the workshop and the mine. The Coal Mines (Minimum Wage) Act must certainly be maintained in force, and suitably amended, so as both to ensure greater uniformity of conditions among the several districts, and to make the district minimum in all cases an effective reality. The same policy will, in the interests of the agricultural laborers, dictate the perpetuation of the legal wage clauses of the new corn law just passed for a term of five years, and the prompt amendment of any defects that may be revealed in their working. And, in view of the fact that many millions of wage earners, notably women and the less skilled workmen in various occupations, are unable by combination to obtain wages adequate for decent maintenance in health, the Labor party intends to see to it that the Trade Boards Act is suitably amended and made to apply to all industrial employments in which any considerable number of those employed obtain less than thirty

shillings per week. This minimum of not less than thirty shillings per week (which will need revision according to the level of prices) ought to be the very lowest statutory base line for the least skilled adult workers, men or women, in any occupation, in all parts of the United Kingdom.

But the coming industrial dislocation, which will inevitably follow the discharge from war service of half of all the working population, imposes new obligations upon the community. The demobilization and discharge of the eight million wage earners now being paid from public funds, either for service with the colors or in munition work and other war trades, will bring to the whole wage-earning class grave peril of unemployment, reduction of wages, and a lasting degradation of the standard of life, which can be prevented only by deliberate national organization. The Labor party has repeatedly called upon the present government to formulate its plan, and to make in advance all arrangements necessary for coping with so unparalleled a dislocation. The policy to which the Labor party commits itself is unhesitating and uncompromising. It is plain that regard should be had, in stopping government orders, reducing the staff of the national factories, and demobilizing the army, to the actual state of employment in particular industries and in different districts, so as both to release first the kinds of labor most urgently required for the revival of peace production and to prevent any congestion of the market. It is no less imperative that suitable provision against being turned suddenly adrift without resources should be made, not only for the soldiers, but also for the three million operatives in munition work and other war trades who will be discharged long before most of the army can be disbanded. On this important point, which is the most urgent of all, the present government has, we believe, down to the present hour, formulated no plan, and come to no decision, and neither the Liberal nor the Conservative party has apparently deemed the matter worthy of agitation. Any government which should allow the discharged soldier or munition worker to fall into the clutches of charity or the Poor law would have to be instantly driven from office by an outburst of popular indignation. What every one of them will look for is a situation in accordance with his capacity.

Securing employment for all.—The Labor party insists—as no other political party has thought fit to do—that the obligation to find suitable employment in productive work for all these men and women rests upon the government for the time being. The work of resettling

the disbanded soldiers and discharged munition workers into new situations is a national obligation; and the Labor party emphatically protests against its being regarded as a matter for private charity. It strongly objects to this public duty being handed over either to committees of philanthropists or benevolent societies, or to any of the military or recruiting authorities. The policy of the Labor party in this matter is to make the utmost use of the trade unions, and, equally for the brainworkers, of the various professional associations. In view of the fact that, in any trade, the best organization for placing men in situations is a national trade union having local branches throughout the kingdom, every soldier should be allowed, if he chooses, to have a duplicate of his industrial discharge notice sent, one month before the date fixed for his discharge, to the secretary of the trade union to which he belongs or wishes to belong. Apart from this use of the trade union (and a corresponding use of the professional association) the government must, of course, avail itself of some such public machinery as that of the employment exchanges; but before the existing exchanges (which will need to be greatly extended) can receive the co-operation and support of the organized labor movement, without which their operations can never be fully successful, it is imperative that they should be drastically reformed, on the lines laid down in the Demobilization Report of the "Labor after the War" Joint Committee; and, in particular, that each exchange should be placed under the supervision and control of a joint committee of employers and trade unionists in equal numbers.

The responsibility of the government, for the time being, in the grave industrial crisis that demobilization will produce, goes, however, far beyond the eight million men and women whom the various departments will suddenly discharge from their own service. The effect of this peremptory discharge on all the other workers has also to be taken into account. To the Labor party it will seem the supreme concern of the government of the day to see to it that there shall be as a result of the gigantic "General Post" which it will itself have deliberately set going, nowhere any degradation of the standard of life. The government has pledged itself to restore the trade union conditions and "pre-war practices" of the workshop, which the trade unions patriotically gave up at the direct request of the government itself; and this solemn pledge must be fulfilled, of course, in the spirit as well as in the letter. The Labor party, moreover, holds it to be the duty of the government of the day to take all necessary steps to

prevent the standard rates of wages, in any trade or occupation whatsoever, from suffering any reduction, relatively to the contemporary cost of living. Unfortunately, the present government, like the Liberal and Conservative parties, so far refuses to speak on this important matter with any clear voice. We claim that it should be a cardinal point of government policy to make it plain to every capitalist employer that any attempt to reduce the customary rates of wages when peace comes, or to take advantage of the dislocation of demobilization to worsen the conditions of employment in any grade whatsoever, will certainly lead to embittered industrial strife, which will be in the highest degree detrimental to the national interests; and that the government of the day will not hesitate to take all necessary steps to avert such a calamity. In the great impending crisis the government of the day should not only, as the greatest employer of both brainworkers and manual workers, set a good example in this respect, but should also actively seek to influence private employers by proclaiming in advance that it will not itself attempt to lower the standard rates or conditions in public employment; by announcing that it will insist on the most rigorous observance of the fair-wages clause in all public contracts, and by explicitly recommending every local authority to adopt the same policy.

But nothing is more dangerous to the standard of life, or so destructive of those minimum conditions of healthy existence, which must in the interests of the community be assured to every worker, than any widespread or continued unemployment. It has always been a fundamental principle of the Labor party (a point on which, singularly enough, it has not been followed by either of the other political parties) that, in a modern industrial community, it is one of the foremost obligations of the government to find, for every willing worker, whether by hand or by brain, productive work at standard rates.

It is accordingly the duty of the government to adopt a policy of deliberately and systematically preventing the occurrence of unemployment, instead of (as heretofore) letting unemployment occur, and then seeking, vainly and expensively, to relieve the unemployed. It is now known that the government can, if it chooses, arrange the public works and the orders of national departments and local authorities in such a way as to maintain the aggregate demand for labor in the whole kingdom (including that of capitalist employers) approximately at a uniform level from year to year; and it is therefore a primary obligation of the government to prevent any considerable or

widespread fluctuations in the total numbers employed in times of good or bad trade. But this is not all. In order to prepare for the possibility of there being any unemployment, either in the course of demobilization or in the first years of peace, it is essential that the government should make all necessary preparations for putting instantly in hand, directly or through the local authorities, such urgently needed public works as (*a*) the rehousing of the population alike in rural districts, mining villages, and town slums, to the extent, possibly, of a million new cottages and an outlay of 300 millions sterling; (*b*) the immediate making good of the shortage of schools, training colleges, technical colleges, etc., and the engagement of the necessary additional teaching, clerical, and administrative staffs; (*c*) new roads; (*d*) light railways; (*e*) the unification and reorganization of the railway and canal system; (*f*) afforestation; (*g*) the reclamation of land; (*h*) the development and better equipment of our ports and harbors; (*i*) the opening up of access to land by co-operative small holdings and in other practicable ways. Moreover, in order to relieve any pressure of an overstocked labor market, the opportunity should be taken, if unemployment should threaten to become widespread, (*a*) immediately to raise the school-leaving age to sixteen; (*b*) greatly to increase the number of scholarships and bursaries for secondary and higher education; and (*c*) substantially to shorten the hours of labor of all young persons, even to a greater extent than the eight hours per week contemplated in the new Education Bill, in order to enable them to attend technical and other classes in the daytime. Finally, wherever practicable, the hours of adult labor should be reduced to not more than forty-eight per week, without reduction of the standard rates of wages. There can be no economic or other justification for keeping any man or woman to work for long hours, or at overtime, while others are unemployed.

Social insurance against unemployment.—In so far as the government fails to prevent unemployment—whenever it finds it impossible to discover for any willing worker, man or woman, a suitable situation at the standard rate—the Labor party holds that the government must, in the interest of the community as a whole, provide him or her with adequate maintenance, either with such arrangements for honorable employment or with such useful training as may be found practicable, according to age, health, and previous occupation. In many ways the best form of provision for those who must be unemployed, because the industrial organization of the community so far

breaks down as to be temporarily unable to set them to work, is the out-of-work benefit afforded by a well-administered trade union. This is a special tax on the trade unionists themselves which they have voluntarily undertaken, but toward which they have a right to claim a public subvention—a subvention which was actually granted by Parliament (though only to the extent of a couple of shillings or so per week) under Part II of the Insurance Act. The arbitrary withdrawal by the government in 1915 of this statutory right of the trade unions was one of the least excusable of the war economies; and the Labor party must insist on the resumption of this subvention immediately the war ceases, and on its increase to at least half the amount spent in out-of-work benefit. The extension of state unemployment insurance to other occupations may afford a convenient method of providing for such of the unemployed, especially in the case of badly paid women workers and the less skilled men, whom it is difficult to organize in trade unions. But the weekly rate of the state unemployment benefit needs, in these days of high prices, to be considerably raised; while no industry ought to be compulsorily brought within its scope against the declared will of the workers concerned, and especially of their trade unions. In one way or another remunerative employment or honorable maintenance must be found for every willing worker, by hand or by brain, in bad times as well as in good. It is clear that, in the twentieth century, there must be no question of driving the unemployed to anything so obsolete and discredited as either private charity, with its haphazard and ill-considered doles, or the Poor law, with the futilities and barbarities of its "Stone Yard," or its "Able-Bodied Test Workhouse." Only on the basis of a universal application of the policy of the national minimum, affording complete security against destitution, in sickness and health, in good times and bad alike, to every member of the community of whatever age or sex, can any worthy social order be built up.

B. THE DEMOCRATIC CONTROL OF INDUSTRY

The universal application of the policy of the national minimum is, of course, only the first of the pillars of the house that the Labor party intends to see built. What marks off this party most distinctively from any of the other political parties is its demand for the full and genuine adoption of the principle of democracy. The first condition of democracy is effective personal freedom. This has suffered so many encroachments during the war that it is necessary

to state with clearness that the complete removal of all the war-time restrictions on freedom of speech, freedom of publication, freedom of the press, freedom of travel, and freedom of choice of place of residence and kind of employment must take place the day after peace is declared. The Labor party declares emphatically against any continuance of the Military Service acts a moment longer than the imperative requirements of the war excuse. But individual freedom is of little use without complete political rights. The Labor party sees its repeated demands largely conceded in the present Representation of the People Act, but not yet wholly satisfied. The party stands, as heretofore, for complete adult suffrage, with not more than a three months' residential qualification, for effective provision for absent electors to vote, for absolutely equal rights for both sexes, for the same freedom to exercise civic rights for the "common soldier" as for the officer, for shorter Parliaments, for the complete abolition of the House of Lords, and for a most strenuous opposition to any new second chamber, whether elected or not, having in it any element of heredity or privilege, or of the control of the House of Commons by any party or class. But unlike the Conservative and Liberal parties, the Labor party insists on democracy in industry as well as in government. It demands the progressive elimination from the control of industry of the private capitalist, individual or joint-stock; and the setting free of all who work, whether by hand or by brain, for the service of the community, and of the community only. And the Labor party refuses absolutely to believe that the British people will permanently tolerate any reconstruction or perpetuation of the disorganization, waste, and inefficiency involved in the abandonment of British industry to a jostling crowd of separate private employers, with their minds bent, not on the service of the community, but—by the very law of their being—only on the utmost possible profiteering. What the nation needs is undoubtedly a great bound onward in its aggregate productivity. But this cannot be secured merely by pressing the manual workers to more strenuous toil, or even by encouraging the "Captains of Industry" to a less wasteful organization of their several enterprises on a profit-making basis. What the Labor party looks to is a genuinely scientific reorganization of the nation's industry, no longer deflected by individual profiteering, on the basis of the common ownership of the means of production, the equitable sharing of the proceeds among all who participate in any capacity and only among these, and the adoption, in particular services and occupations, of

those systems and methods of administration and control that may be found, in practice, best to promote the public interest.

Immediate nationalization.—The Labor party stands not merely for the principle of the common ownership of the nation's land, to be applied as suitable opportunities occur, but also, specifically, for the immediate nationalization of railways, mines, and the production of electrical power. We hold that the very foundation of any successful reorganization of British industry must necessarily be found in the provision of the utmost facilities for transport and communication, the production of power at the cheapest possible rate, and the most economical supply of both electrical energy and coal to every corner of the kingdom. Hence the Labor party stands, unhesitatingly, for the national ownership and administration of the railways and canals, and their union, along with harbors and roads, and the posts and telegraphs—not to say also the great lines of steamers which could at once be owned, if not immediately directly managed in detail, by the government—in a united national service of communication and transport; to be worked, unhampered by capitalist, private, or purely local interests (and with a steadily increasing participation of the organized workers in the management, both central and local), exclusively for the common good. If any government should be so misguided as to propose, when peace comes, to hand the railways back to the shareholders; or should show itself so spendthrift of the nation's property as to give these shareholders any enlarged franchise by presenting them with the economies of unification or the profits of increased railway rates; or so extravagant as to bestow public funds on the re-equipment of privately owned lines—all of which things are now being privately intrigued for by the railway interests—the Labor party will offer any such project the most strenuous opposition. The railways and canals, like the roads, must henceforth belong to the public.

In the production of electricity, for cheap power, light, and heating this country has so far failed, because of hampering private interests, to take advantage of science. Even in the largest cities we still "peddle" our electricity on a contemptibly small scale. What is called for, immediately after the war, is the erection of a score of gigantic "super-power stations," which could generate, at incredibly cheap rates, enough electricity for the use of every industrial establishment and every private household in Great Britain; the present municipal and joint-stock electrical plants being universally linked up

and used for local distribution. This is inevitably the future of electricity. It is plain that so great and so powerful an enterprise, affecting every industrial enterprise and, eventually, every household, must not be allowed to pass into the hands of private capitalists. They are already pressing the government for the concession, and neither the Liberal nor the Conservative party has yet made up its mind to a refusal of such a new endowment of profiteering in what will presently be the life-blood of modern productive industry. The Labor party demands that the production of electricity on the necessary gigantic scale shall be made from the start (with suitable arrangements for municipal co-operation in local distribution) a national enterprise, to be worked exclusively with the object of supplying the whole kingdom with the cheapest possible power, light, and heat.[1]

But with railways and the generation of electricity in the hands of the public, it would be criminal folly to leave to the present 1,500 colliery companies the power of "holding up" the coal supply. These are now all working under public control, on terms that virtually afford to their shareholders a statutory guarantee of their swollen incomes. The Labor party demands the immediate nationalization of mines, the extraction of coal and iron being worked as a public service (with a steadily increasing participation in the management, both central and local, of the various grades of persons employed), and the whole business of the retail distribution of household coal being undertaken, as a local public service, by the elected municipal or county councils. And there is no reason why coal should fluctuate in price any more than railway fares, or why the consumer should be made to pay more in winter than in summer, or in one town than another. What the Labor party would aim at is, for the household coal of standard quality, a fixed and uniform price for the whole kingdom, payable by rich and poor alike, as unalterable as the penny postage stamp.

But the sphere of immediate nationalization is not restricted to these great industries. We shall never succeed in putting the gigantic system of health insurance on a proper footing, or secure a clear field for the beneficent work of the Friendly Societies, or gain a free hand for the necessary development of the urgently called for ministry of health and the local public health service, until the nation expropriates the profit-making industrial insurance companies, which

[1] Ed. Note.—Cf. Section XXXIII, p. 340.

now so tyrannously exploit the people with their wasteful house-to-house industrial life assurance. Only by such an expropriation of life assurance companies can we secure the universal provision, free from the burdensome toll of weekly pence, of the indispensable funeral benefit. Nor is it in any sense a "class" measure. Only by the assumption by a state department of the whole business of life assurance can the millions of policy-holders of all classes be completely protected against the possibly calamitous results of the depreciation of securities and suspension of bonuses which the war is causing. Only by this means can the great staff of insurance agents find their proper place as civil servants, with equitable conditions of employment, compensation for any disturbance, and security of tenure, in a nationally organized public service for the discharge of the steadily increasing functions of the government in vital statistics and social insurance.

In quite another sphere the Labor party sees the key to temperance reform in taking the entire manufacture and retailing of alcoholic drink out of the hands of those who find profit in promoting the utmost possible consumption. This is essentially a case in which the people, as a whole, must deal with the licensing question in accordance with local opinion. For this purpose, localities should have conferred upon them facilities: (*a*) to prohibit the sale of liquor within their boundaries; (*b*) to reduce the number of licenses and regulate the conditions under which they may be held; and (*c*) if a locality decides that licenses are to be granted, to determine whether such licenses shall be under private or any form of public control.

Control of capitalist industry.—Meanwhile, however, we ought not to throw away the valuable experience now gained by the government in its assumption of the importation of wheat, wool, metals, and other commodities, and in its control of the shipping, wollen, leather, clothing, boot and shoe, milling, baking, butchering, and other industries. The Labor party holds that, whatever may have been the shortcomings of this government importation and control, it has demonstrably prevented a lot of "profiteering." Nor can it end immediately on the declaration of peace. The people will be extremely foolish if they ever allow their indispensable industries to slip back into the unfettered control of private capitalists, who are, actually at the instance of the government itself, now rapidly combining, trade by trade, into monopolist trusts which may presently become as ruthless in their extortion as the worst American examples. Standing as it does for

the democratic control of industry, the Labor party would think twice before it sanctioned any abandonment of the present profitable centralization of purchase of raw material; of the present carefully organized "rationing," by joint committees of the trades concerned, of the several establishments with the materials they require; of the present elaborate system of "costing" and public audit of manufacturers' accounts, so as to stop the waste heretofore caused by the mechanical inefficiency of the more backward firms; of the present salutary publicity of manufacturing processes and expenses thereby ensured; and, on the information thus obtained (in order never again to revert to the old-time profiteering) of the present rigid fixing, for standardized products, of maximum prices at the factory, at the warehouse of the wholesale trader, and in the retail shop. This question of the retail prices of household commodities is emphatically the most practical of all political issues to the woman elector. The male politicians have too long neglected the grievances of the small household, which is the prey of every profiteering combination; and neither the Liberal nor the Conservative party promises, in this respect, any amendment. This, too, is in no sense a "class" measure. It is, so the Labor party holds, just as much the function of government, and just as necessary a part of the democratic regulation of industry, to safeguard the interests of the community as a whole, and those of all grades and sections of private consumers, in the matter of prices, as it is, by the Factory and Trade Boards acts, to protect the rights of the wage-earning producers in the matter of wages, hours of labor, and sanitation.

C. THE REVOLUTION IN NATIONAL FINANCE

In taxation, also, the interests of the professional and housekeeping classes are at one with those of the manual workers. Too long has our national finance been regulated, contrary to the teaching of political economy, according to the wishes of the possessing classes and the profits of the financiers. The colossal expenditure involved in the present war (of which, against the protest of the Labor party, only a quarter has been raised by taxation, while three-quarters have been borrowed at onerous rates of interest, to be a burden on the nation's future) brings things to a crisis. When peace comes, capital will be needed for all sorts of social enterprises, and the resources of government will necessarily have to be vastly greater than they were before the war. Meanwhile innumerable new private fortunes are being

heaped up by those who have taken advantage of the nation's needs; and the one-tenth of the population which owns nine-tenths of the riches of the United Kingdom, far from being made poorer, will find itself, in the aggregate, as a result of the war, drawing in rent and interest and dividends a larger nominal income than ever before. Such a position demands a revolution in national finance. How are we to discharge a public debt that may well reach the almost incredible figure of seven thousand million pounds sterling, and at the same time raise an annual revenue which, for local as well as central government, must probably reach one thousand millions a year? It is over this problem of taxation that the various political parties will be found to to be most sharply divided.

The Labor party stands for such a system of taxation as will yield all the necessary revenue to the government without encroaching on the prescribed national minimum standard of life of any family whatsoever, without hampering production or discouraging any useful personal effort, and with the nearest possible approximation to equality of sacrifice. We definitely repudiate all proposals for a protective tariff, in whatever specious guise they may be cloaked, as a device for burdening the consumer with unnecessarily enhanced prices, to the profit of the capitalist employer or landed proprietor, who avowedly expects his profit or rent to be increased thereby. We shall strenuously oppose any taxation, of whatever kind, which would increase the price of food or of any other necessary of life. We hold that indirect taxation on commodities, whether by customs or excise, should be strictly limited to luxuries, and concentrated principally on those of which it is socially desirable that the consumption should be actually discouraged. We are at one with the manufacturer, the farmer, and the trader in objecting to taxes interfering with production or commerce, or hampering transport and communication. In all these matters—once more in contrast with the other political parties, and by no means in the interests of the wage-earners alone—the Labor party demands that the very definite teachings of economic science should no longer be disregarded as they have been in the past.

For the raising of the greater part of the revenue now required the Labor party looks to the direct taxation of the incomes above the necessary cost of family maintenance; and, for the requisite effort to pay off the national debt, to the direct taxation of private fortunes, both during life and at death. The income tax and supertax ought at once to be thoroughly reformed in assessment and collection, in

abatements and allowances, and in graduation and differentiation, so as to levy the required total sum in such a way as to make the real sacrifice of all the taxpayers as nearly as possible equal. This would involve assessment by families instead of by individual persons, so that the burden is alleviated in proportion to the number of persons to be maintained. It would involve the raising of the present unduly low minimum income assessable to the tax, and the lightening of the present unfair burden on the great mass of professional and small trading classes by a new scale of graduation, rising from a penny in the pound on the smallest assessable income up to sixteen or even nineteen shillings in the pound on the highest income of the millionaires. It would involve bringing into assessment the numerous windfalls of profit that now escape, and a further differentiation between essentially different kinds of income. The excess-profits tax might well be retained in an appropriate form, while, so long as mining royalties exist, the mineral-rights duty ought to be increased. The steadily rising unearned increment of urban and mineral land ought, by an appropriate direct taxation of land values, to be wholly brought into the public exchequer. At the same time, for the service and redemption of the national debt, the death duties ought to be regraduated, much more strictly collected, and greatly increased. In this matter we need, in fact, completely to reverse our point of view, and to rearrange the whole taxation of inheritance from the standpoint of asking what is the maximum amount that any rich man should be permitted at death to divert, by his will, from the national exchequer, which should normally be the heir to all private riches in excess of a quite moderate amount by way of family provision. But all this will not suffice. It will be imperative at the earliest possible moment to free the nation from at any rate the greater part of its new load of interest-bearing debt for loans which ought to have been levied as taxation; and the Labor party stands for a special capital levy to pay off, if not the whole, a very substantial part, of the entire national debt—a capital levy chargeable like the death duties on all property, but (in order to secure approximate equality of sacrifice) with exemption of the smallest savings, and for the rest at rates very steeply graduated, so as to take only a small contribution from the little people and a very much larger percentage from the millionaires.

Over this issue of how the financial burden of the war is to be borne, and how the necessary revenue is to be raised, the greatest political battles will be fought. In this matter the Labor party

claims the support of four-fifths of the whole nation, for the interests of the clerk, the teacher, the doctor, the minister of religion, the average retail shopkeeper and trader, and all the mass of those living on small incomes are identical with those of the artisan. The landlords, the financial magnates, the possessors of great fortunes, will not, as a class, willingly forego the relative immunity that they have hitherto enjoyed. The present unfair subjection of the co-operative society to an excess-profits tax on the "profits" which it has never made—specially dangerous as "the thin end of the wedge" of penal taxation of this laudable form of democratic enterprise—will not be abandoned without a struggle. Every possible effort will be made to juggle with the taxes, so as to place upon the shoulders of the mass of laboring folk and upon the struggling households of the professional men and small traders (as was done after every previous war)—whether by customs or excise duties, by industrial monopolies, by unnecessarily high rates of postage and railway fares, or by a thousand and one other ingenious devices—an unfair share of the national burden. Against these efforts the Labor party will take the firmest stand.

D. THE SURPLUS WEALTH FOR THE COMMON GOOD

In the disposal of the surplus above the standard of life, society has hitherto gone as far wrong as in its neglect to secure the necessary basis of any genuine industrial efficiency or decent social order. We have allowed the riches of our mines, the rental value of the lands superior to the margin of cultivation, the extra profits of the fortunate capitalists, even the material outcome of scientific discoveries—which ought by now to have made this Britain of ours immune from class poverty or from any widespread destitution—to be absorbed by individual proprietors; and then devoted very largely to the senseless luxury of an idle rich class. Against this misappropriation of the wealth of the community, the Labor party—speaking in the interests, not of the wage earners alone, but of every grade and section of producers by hand or by brain, not to mention also those of the generations that are to succeed us, and of the permanent welfare of the community—emphatically protests. One main pillar of the house that the Labor party intends to build is the future appropriation of the surplus, not to the enlargement of any individual fortune, but to the common good. It is from this constantly arising surplus (to be secured, on the one hand, by nationalization and municipalization and, on the other, by the steeply graduated taxation of private

incomes and riches) that will have to be found the new capital which the community day by day needs for the perpetual improvement and increase of its various enterprises, for which we shall decline to be dependent on the usury-exacting financiers. It is from the same source that has to be defrayed the public provision for the sick and infirm of all kinds (including that for maternity and infancy) which is still so scandously insufficient; for the aged and those prematurely incapacitated by accident or disease, now in many ways so imperfectly cared for; for the education alike of children, of adolescents and of adults, in which the Labor party demands a genuine equality of opportunity, overcoming all differences of material circumstances; and for the organization of public improvements of all kinds, including the brightening of the lives of those now condemned to almost ceaseless toil, and a great development of the means of recreation. From the same source must come the greatly increased public provision that the Labor party will insist on being made for scientific investigation and original research, in every branch of knowledge, not to say also for the promotion of music, literature, and fine art, which have been under capitalism so greatly neglected, and upon which, so the Labor party holds, any real development of civilization fundamentally depends. Society, like the individual, does not live by bread alone—does not exist only for perpetual wealth production. It is in the proposal for this appropriation of every surplus for the common good—in the vision of its resolute use for the building up of the community as a whole instead of for the magnification of individual fortunes—that the Labor party, as the party of the producers by hand or by brain, most distinctively marks itself off from the older political parties, standing, as these do, essentially for the maintenance, unimpaired, of the perpetual private mortgage upon the annual product of the nation that is involved in the individual ownership of land and capital.

THE STREET OF TOMORROW

The house which the Labor party intends to build, the four pillars of which have now been described, does not stand alone in the world. Where will it be in the street of tomorrow? If we repudiate on the one hand the imperialism that seeks to dominate other races, or to impose our own will on other parts of the British empire, so we disclaim equally any conception of a selfish and insular "non-interventionism," unregarding of our special obligations to our

fellow-citizens overseas; of the corporate duties of one nation to another; of the moral claims upon us of the non-adult races, and of our own indebtedness to the world of which we are part. We look for an ever-increasing intercourse, a constantly developing exchange of commodities, a continually expanding friendly co-operation among all the peoples of the world. With regard to that great commonwealth of all races, all colors, all religions, and all degrees of civilization that we call the British Empire, the Labor party stands for its maintenance and its progressive development on the lines of local autonomy and "Home Rule All Round"; the fullest respect for the rights of each people, whatever its color, to all the democratic self-government of which it is capable and to the proceeds of its own toil upon the resources of its own territorial home; and the closest possible co-operation among all the various members of what has become essentially, not an empire in the old sense, but a Britannic alliance.

We desire to maintain the most intimate relations with the Labor parties overseas. Like them, we have no sympathy with the projects of "Imperial Federation," in so far as these imply the subjection to a common imperial legislature wielding coercive power (including dangerous facilities for coercive imperial taxation and for enforced military service), either of the existing self-governing Dominions, whose autonomy would be thereby invaded; or of the United Kingdom, whose freedom of democratic self-development would thereby be hampered; or of India and the colonial dependencies, which would thereby run the risk of being further exploited for the benefit of a "White Empire." We do not intend, by any such "Imperial Senate," either to bring the plutocracy of Canada and South Africa to the aid of the British aristocracy or to enable the landlords and financiers of the mother-country to unite in controlling the growing popular democracies overseas. The autonomy of each self-governing part of the empire must be intact.

What we look for, besides a constant progress in democratic self-government of every part of the Britannic alliance, and especially in India, is a continuous participation of the ministers of the Dominions, of India, and eventually of other dependencies (perhaps by means of their own ministers specially resident in London for this purpose) in the most confidential deliberations of the Cabinet, so far as foreign policy and imperial affairs are concerned; and the annual assembly of an Imperial Council, representing all constituents of the

Britannic alliance, and all parties in their local legislatures, which should discuss all matters of common interest, but only in order to make recommendations for the simultaneous consideration of the various autonomous local legislatures of what should increasingly take the constitutional form of an alliance of free nations. And we carry the idea farther. As regards our relations to foreign countries, we disavow and disclaim any desire or intention to dispossess or to impoverish any other state or nation. We seek no increase of territory. We disclaim all idea of "economic war." We ourselves object to all protective customs tariffs; but we hold that each nation must be left free to do what it thinks best for its own economic development without thought of injuring others. We believe that nations are in no way damaged by each other's economic prosperity or commercial progress; but, on the contrary, that they are actually themselves mutually enriched thereby. We would therefore put an end to the old entanglements and mystifications of secret diplomacy and the formation of leagues against leagues. We stand for the immediate establishment, actually as a part of the treaty of peace with which the present war will end, of a universal league or society of nations, a supernational authority, with an international high court to try all justiciable issues between nations, an international legislature to enact such common laws as can be mutually agreed upon, and an international council of mediation to endeavor to settle without ultimate conflict even those disputes which are not justiciable. We would have all the nations of the world most solemnly undertake and promise to make common cause against any one of them that broke away from this fundamental agreement. The world has suffered too much from war for the Labor party to have any other policy than that of lasting peace.

MORE LIGHT—BUT ALSO MORE WARMTH!

The Labor party is far from assuming that it possesses a key to open all locks, or that any policy which it can formulate will solve all the problems that beset us. But we deem it important to ourselves as well as to those who may, on the one hand, wish to join the party, or, on the other, to take up arms against it, to make quite clear and definite our aim and purpose. The Labor party wants that aim and purpose, as set forth in the preceding pages, with all its might. It calls for more warmth in politics, for much less apathetic acquiescence in the miseries that exist, for none of the cynicism that saps the life

of leisure. On the other hand, the Labor party has no belief in any of the problems of the world being solved by good will alone. Good will without knowledge is warmth without light. Especially in all the complexities of politics, in the still undeveloped science of society, the Labor party stands for increased study, for the scientific investigation of each succeeding problem, for the deliberate organization of research, and for a much more rapid dissemination among the whole people of all the science that exists. And it is perhaps specially the Labor party that has the duty of placing this advancement of science in the forefront of its political program. What the Labor party stands for in all fields of life is, essentially, democratic co-operation; and co-operation involves a common purpose which can be agreed to, a common plan which can be explained and discussed, and such a measure of success in the adaptation of means to ends as will insure a common satisfaction. An autocratic sultan may govern without science if his whim is law. A plutocratic party may choose to ignore science if it is heedless whether its pretended solutions of social problems that may win political triumphs ultimately succeed or fail. But no Labor party can hope to maintain its position unless its proposals are, in fact, the outcome of the best political science of its time, or to fulfil its purpose unless that science is continually wresting new fields from human ignorance. Hence, although the purpose of the Labor party must, by the law of its being, remain for all time unchanged, its policy and its program will, we hope, undergo a perpetual development, as knowledge grows, and as new phases of the social problem present themselves, in a continually finer adjustment of our measures to our ends. If law is the mother of freedom, science, to the Labor party, must be the parent of law.

3. PROGRAM OF THE WORLD'S PEACE[1]

It will be our wish and purpose that the processes of peace when they are begun shall be absolutely open, and that they shall involve and permit henceforth no secret understandings of any kind. The day of conquest and aggrandizement is gone by; so is also the day of secret covenants entered into in the interest of particular governments, and likely at some unlooked-for moment to upset the peace of the world. It is this happy fact, now clear to the view of every public man whose thoughts do not still linger in an age that is dead and gone, which makes it possible for every nation whose purposes are consistent

[1] By Woodrow Wilson. From address to Congress, January 8, 1918.

with justice and the peace of the world to avow now or at any other time the objects it has in view.

The program of the world's peace is our program; and that program, the only possible program, as we see it, is this:

I. Open covenants of peace, openly arrived at; after which there shall be no private international understandings of any kind, but diplomacy shall proceed always frankly and in the public view.

II. Absolute freedom of navigation upon the seas, outside territorial waters, alike in peace and in war, except as the seas may be closed in whole or in part by international action for the enforcement of international covenants.

III. The removal, so far as possible, of all economic barriers and the establishment of an equality of trade conditions among all the nations consenting to the peace and associating themselves for its maintenance.

IV. Adequate guarantees given and taken that national armaments will be reduced to the lowest point consistent with domestic safety.

V. A free, open-minded, and absolutely impartial adjustment of all colonial claims, based upon a strict observance of the principle that in determining all such questions of sovereignty the interests of the populations concerned must have equal weight with the equitable claims of the government whose title is to be determined.

VI. The evacuation of all Russian territory, and such a settlement of all questions affecting Russia as will secure the best and freest co-operation of the other nations of the world in obtaining for her an unhampered and unembarrassed opportunity for the independent determination of her own political development and national policy, and assure her of a sincere welcome into the society of free nations under institutions of her own choosing; and, more than a welcome, assistance also of every kind that she may need and may herself desire. The treatment accorded Russia by her sister nations in the months to come will be the acid test of their good will, of their comprehension of her needs as distinguished from their own interests, and of their intelligent and unselfish sympathy.

VII. Belgium, the whole world will agree, must be evacuated and restored without any attempt to limit the sovereignty which she enjoys in common with all other free nations. No other single act will serve as this will serve to restore confidence among the nations in the laws which they have themselves set and determined for the

government of their relations with one another. Without this healing act the whole structure and validity of international law is forever impaired.

VIII. All French territory should be freed and the invaded portions restored; and the wrong done to France by Prussia in 1871 in the matter of Alsace-Lorraine, which has unsettled the peace of the world for nearly fifty years, should be righted, in order that peace may once more be made secure in the interest of all.

IX. A readjustment of the frontiers of Italy should be effected along clearly recognizable lines of nationality.

X. The peoples of Austria-Hungary, whose place among the nations we wish to see safeguarded and assured, should be accorded the freest opportunity of autonomous development.

XI. Roumania, Serbia, and Montenegro should be evacuated; occupied territories restored; Serbia accorded free and secure access to the sea; and the relations of the several Balkan States to one another determined by friendly counsel along historically established lines of allegiance and nationality; and international guaranties of the political and economic independence and territorial integrity of the several Balkan States should be entered into.

XII. The Turkish portions of the present Ottoman Empire should be assured a secure sovereignty, but the other nationalities which are now under Turkish rule should be assured an undoubted security of life and an absolutely unmolested opportunity of autonomous development, and the Dardanelles should be permanently opened as a free passage to the ships and commerce of all nations under international guaranties.

XIII. An independent Polish State should be erected which should include the territories inhabited by indisputably Polish populations, which should be assured a free and secure access to the sea, and whose political and economic independence and territorial integrity should be guaranteed by international covenant.

XIV. A general association of nations must be formed, under specific covenants, for the purpose of affording mutual guaranties of political independence and territorial integrity to great and small states alike.

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